Filters used for the printout

Curriculum period: 2025-2026. **Studies included in the printout:** Courses. **Languages of the descriptions:** English. **Language of the printout template:** English.

LUTMEXCHAUTUMN Exchange Studies (Autumn semester)

LUTMEXCHAUTUMN Exchange Studies (Autumn semester)

CURRICULUM PERIOD 2025-2026

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	min 20 cr
Languages	English
Grading scale	Grading scale for degrees (distinction)
Content approval required	no
Locations	⚠ [information missing]
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LUT Business School 100%
Responsible person	Suvi Tiainen, Responsible teacher
Degree programme type	Master's Degree
Degree titles	Master of Science (Economics and Business Administration)
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law
Education classification	732101 Master of Science (Economics and Business Administration), Business Economics

Content description

EN: Whether you are planning to stay for a semester or a year, the exhange students coming to LUT have a proud history of enjoying themselves.
LUT will offer a large number of courses in many academic fields and the choice is yours! However, in order for you to make the most of your stay, please be proactive and take responsibility for your study plan and your studies.

Most of the courses are intended for Master's level or final year Bachelor students, but there are also choices available for those in their Bachelor studies. As the majority of courses are taught at the Master's level, students are expected to have bachelor level knowledge of relevant subjects.

The courses you include in your learning agreement may be subject to chance. A learning agreement is not considered as a course registration.
When starting your studies at LUT you need to enroll to courses and exams.

It is possible to study approximately 30 ECTS credits per one semester. Minimum number of credits per semester is 20.

We at Lappeenranta-Lahti University of Technology LUT (LUT University) invite you to join our high-standard and cross-cultural education and research community.

More information about exhange study experience at LUT www.lut.fi/exhange

DEGREE STRUCTURE

Part of the degree	Credits
EXCHANGE STUDIES (AUTUMN SEMESTER) DRAFT	min 20 cr
LUTMEXCHAUTUMNK EXCHANGE STUDIES (AUTUMN SEMESTER) DRAFT	min 0 cr
MASTER'S LEVEL STUDIES (grouping module)	
KAMEXCHAUTUMN_LPR BUSINESS ADMINISTRATION DRAFT	min 0 cr
A350A0050 Business Research Methods DRAFT	6 cr
A330A0700 Consumer Behaviour in the Age of Digitalization DRAFT	3 cr
A330A0600 Digital Marketing Certificate DRAFT	3 cr
A310A0660 Financial Supply Management DRAFT	6 cr
A240A0060 Fuzzy Sets and Fuzzy Logic DRAFT	6 cr
A320A2000 Global Business Environment DRAFT	6 cr
A210A0601 Information Systems in Corporate Management and Decision-making DRAFT	6 cr
A330A0100 International Business Strategies DRAFT	6 cr
A220A0200 International Financial Management DRAFT	6 cr
A330A0900 Managing International Marketing DRAFT	6 cr
A320A6000 Prototype Project at J. Hyneman Center DRAFT	6 cr
A330A0300 Strategic Global Marketing Management DRAFT	6 cr
A330A0352 Strategic Issues in Digital Marketing DRAFT	6 cr
A310A0101 Strategic Supply Management DRAFT	6 cr
A310A0603 Supplier Development and Relationship Management DRAFT	6 cr
A310A0501 Sustainable Global Sourcing DRAFT	6 cr
A350A0501 Sustainable Strategy DRAFT	6 cr
A210A0610 International Corporate Governance and Financial Reporting DRAFT	6 cr
TUDEXCHAUTUMN_LPR INDUSTRIAL ENGINEERING AND MANAGEMENT DRAFT	min 0 cr
CS10A0864 Research Methods in Management DRAFT	6 cr

CS30A1342 Technology and Innovation Management: project course 6 cr
DRAFT

CS34A0551 Business Idea Development 6 cr
DRAFT

CS30A1620 Artificial Inventiveness 1 cr
DRAFT

CS30A0010 Technology and innovation management: introductory course 3 cr
DRAFT

CS30A1372 Creative Design and Problem Solving 6 cr
DRAFT

CS39A0221 Technology design for disability and inclusion 3 cr
DRAFT

CS30A0810 Must-Have Math for Decision Makers 3 cr
DRAFT

CS30A0820 The Dark Side of Sustainability 3 cr
DRAFT

CS40A0170 Interdisciplinary Course on Sustainable Finance 5-6 cr
DRAFT

YTMEXCHAUTUMNOTHERS_LPR SOCIAL SCIENCES min 0 cr
DRAFT

YTS010600 Economy and Society 5 cr
DRAFT

YTS011400 Introduction to sociotechnical food, energy and water systems 5 cr
DRAFT

YTS012100 Introduction to sociotechnical food, energy and water systems, workshop 5 cr
DRAFT

YTS011000 Political Economy of Digital Transformation 5 cr
DRAFT

VTS010450 Introduction to Communication Studies 5 cr
DRAFT

KIEEXCHAUTUMN_LPR LANGUAGE STUDIES min 0 cr
DRAFT

FINNISH (grouping module)

K200CE69 Finnish 1 3 cr
DRAFT

K200CE70 Finnish 2 3 cr
DRAFT

K200CH62 Finnish 3 3 cr
DRAFT

K200CH63 Finnish 4 3 cr
DRAFT

K200CL50 Finnish for Work 1 5 cr
DRAFT

K200CG35 Finnish for Work 2 5 cr
DRAFT

K200CP86 Finnish for Work 3 5 cr
DRAFT

KM00CO04 Finnish Culture and Society 3 cr
DRAFT

K200CU41 Suomi with Love 1 3 cr
DRAFT

K200DE18 Suomi with Love 2 3 cr
DRAFT

K200CS72 Independent study in Finnish 2 cr
DRAFT

ENGLISH (grouping module)

KE00BZ84 English for Professional Development (Business) 4 cr
DRAFT

KE00BZ85 English for Professional Development (Technology) 4 cr
DRAFT

KE00CG81 Business Writing 3 cr
DRAFT

KE00BZ81 Academic Writing 3 cr
DRAFT

KE00CG33 Writing for Digital Media 4 cr
DRAFT

KE00CQ38 Introduction to Copywriting 2 cr
DRAFT

KE00CG79 Professional Reading 3 cr
DRAFT

KE00CQ81 Effective Presentations 2 cr
DRAFT

KE00BZ82 Professional Meetings and Discussions 4 cr
DRAFT

KE00BX35 English Pronunciation 1 cr
DRAFT

KE00CC64 English Prep Course 3 cr
DRAFT

KE00DG83 English and AI: Terminology, Ethics and Writing 1 cr
DRAFT

GERMAN (grouping module)

KD00CH39 German 1 3 cr
DRAFT

KD00CH40 German 2 3 cr
DRAFT

KD00CH41 German 3 3 cr
DRAFT

KD00CH42 German for Work 1 3 cr
DRAFT

KD00CT54 German for Work 3 3 cr
DRAFT

KD00BX51 Business German 3 cr
DRAFT

FRENCH (grouping module)

KF00CH30 French 1 3 cr
DRAFT

KF00CH31 French 2 3 cr
DRAFT

KF00CH32 French 3 3 cr
DRAFT

KF00CG43 French for Work 1 3 cr
DRAFT

- **KF00CG44** French for Work 2 — 3 cr
  DRAFT
- SPANISH (grouping module)
  - **KP00CK94** Spanish 1 — 3 cr
    DRAFT
  - **KP00CH26** Spanish 2 — 3 cr
    DRAFT
  - **KP00CH27** Spanish 3 — 3 cr
    DRAFT
  - **KP00BX61** Spanish for Working Life 1 — 3 cr
    DRAFT
  - **KP00BX62** Spanish for Working Life 2 — 3 cr
    DRAFT
- CHINESE (grouping module)
- INTERCULTURAL COMPETENCE AND COMMUNICATION (grouping module)
  - **KM00BX75** Each one teach one — 3 cr
    DRAFT
  - **KE00CF69** Intercultural Competence and Communication — 5 cr
    DRAFT
  - **KE00CH94** Diversity Management and Global Citizenship — 5 cr
    DRAFT
  - **KM00CO04** Finnish Culture and Society — 3 cr
    DRAFT

BACHELOR'S LEVEL STUDIES (grouping module)

- **KAKEXCHAUTUMN_LPR** BUSINESS ADMINISTRATION — min 0 cr
  DRAFT
  - **A380A0320** Applied Consumer Behaviour — 6 cr
    DRAFT
  - **A130A0620** Basics in MS Excel for Business Students — 3 cr
    DRAFT
  - **A380A0131** Business Relationships in International Value Networks — 6 cr
    DRAFT
  - **A240A0010** Introduction to Programmatic Business Analytics — 6 cr
    DRAFT
  - **A320A0011** Introduction to International Entrepreneurship — 6 cr
    DRAFT
  - **A380A7001** Introduction to International Business — 6 cr
    DRAFT
  - **A130A0670** Mathematics for Economics — 6 cr
    DRAFT
  - **A250A0620** Fundamentals of Accounting and Finance — 6 cr
    DRAFT
  - **A380A7010** Principles of Management and Leadership — 6 cr
    DRAFT
  - **KAKEXCHLITOAUTUMN_LPR** BUSINESS ADMINISTRATION ONLY FOR ENGINEERING AND SOCIAL SCIENCE STUDENTS — min 0 cr
    DRAFT
    - **VA10A1500** Introduction to Entrepreneurship — 5 cr
      DRAFT
    - **VA10A1700** Understanding and Managing a Business as a Dynamic Whole - Business Simulation Game — 5 cr
      DRAFT

LAKEXCHAUTUMN_LPR COMPUTATIONAL ENGINEERING min 0 cr
DRAFT

SAKEXCHAUTUMN_LPR ELECTRICAL ENGINEERING min 0 cr
DRAFT

- BL10A0102 Basics of Electrical Engineering 2 cr
  DRAFT
- BL20A0710 Introduction to Electrical Power Systems 5 cr
  DRAFT
- BL30A0510 Introduction to Electrical Drives 3 cr
  DRAFT
- BL40A3010 Introduction to Electrochemical Energy Storage and Conversion Technologies 4 cr
  DRAFT
- BL40A0130 Measurement and Control Systems 5 cr
  DRAFT
- BL40A1732 Digital Electronics 3 cr
  DRAFT
- BL40A5000 Principles of C-Programming 3 cr
  DRAFT

ENKEXCHAUTUMN_LPR ENERGY TECHNOLOGY min 0 cr
DRAFT

- BH20A0720 Engineering Thermodynamics 6 cr
  DRAFT
- BH10A1900 Fundamentals of Energy Technology 2 cr
  DRAFT
- BH61A0000 Fundamentals of Energy Economics 2 cr
  DRAFT
- BH40A0710 Measurements in Energy Technology 2 cr
  DRAFT

YMKEXCHAUTUMN_LPR ENVIRONMENTAL TECHNOLOGY min 0 cr
DRAFT

- BH60A7200 Circular.now 3 cr
  DRAFT
- BH60A6801 Sustainable.now 3-5 cr
  DRAFT

LESKEXCHAUTUMN_LPR LUT SCHOOL OF ENERGY SYSTEMS min 0 cr
DRAFT

- LES10A020 Engineering Physics 3 cr
  DRAFT
- LES10A200 Engineering Mathematics I 3 cr
  DRAFT
- LES10A210 Engineering Mathematics II 3 cr
  DRAFT
- LES10A410 Engineering Project Work 5-10 cr
  DRAFT

KOKEXCHAUTUMN_LPR MECHANICAL ENGINEERING min 0 cr
DRAFT

- BK10A6202 Mechatronics 5 cr
  DRAFT
- BK10A7300 Machine Elements and Principles 5 cr
  DRAFT
- BK10A6400 Basics of FE-Analysis 4 cr
  DRAFT

TIKEXCHAUTUMN_LPR SOFTWARE ENGINEERING — min 0 cr
DRAFT

- CT30A3232 Basics of Linux — 3 cr
  DRAFT
- CT60A5540 Computer networks and Internet — 3 cr
  DRAFT
- CT70A9111 Software Development Skills: Front-End — 1 cr
  DRAFT
- CT70A9140 Software Development Skills: Full-Stack — 3 cr
  DRAFT
- CT70A9120 Software Development Skills: Mobile — 3 cr
  DRAFT
- CT30A2910 Introduction to Web Programming — 3 cr
  DRAFT
- CT70A9150 Introduction to DevOps — 3 cr
  DRAFT

KEKEXCHAUTUMN_LPR CHEMICAL ENGINEERING — min 0 cr
DRAFT

- BJ01A5061 Entrepreneurship and Career Opportunities in Raw Materials Sector — 3 cr
  DRAFT

YTKEXCHAUTUMN_LPR SOCIAL SCIENCES — min 0 cr
DRAFT

- VT10A1400 Environmental Communication — 5 cr
  DRAFT
- VT10A1500 Political Communication, Social Movements and Activism — 5 cr
  DRAFT

FILTERED COURSES

A350A0050 Business Research Methods

A350A0050 Business Research Methods

Abbreviation: A300CE17

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Mika Vanhala, Responsible teacher Argyro Almpanopoulou, Responsible teacher Suvi Tiainen, Administrative person
Study level	Other studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: The course is only for the LBS Master's level students. **Business Administration** students of the LAB University of Applied Sciences are eligible to enroll after they have completed **all methodological courses** in their study structure.

Learning outcomes

EN: After completing the course, the students are able to
- understand the basic concepts of philosophy of science and research
- understand the specific features of qualitative and quantitative research
- define and plan research objectives and choose the research approach based on those objectives
- apply focal methods of qualitative and quantitative research on gathering and analysis of empirical material
- report the methods and research results related to qualitative and quantitative research
- analyze the quality, reliability and validity of qualitative and quantitative research.

Content

EN: - Basic principles of philosophy of science - The objectives of doing research - Research process - Choice of research methods - The specific features of qualitative and quantitative research - Data gathering, methods, analysis and reporting - Assessing the quality of research

Additional information

EN: The course is fully online and without onsite lectures or teaching.
This is a supplementary Master's level course **only for the externally admitted LBS MSc degree students (e.g. with a bachelor's degree from a university of applied science)**. Thus, if you have Bachelor's degree (Economy and Business Administration) in **Finnish university** you don't have to take this course. **LAB students (only business administration)** are also eligible to attend if they have successfully completed their compulsory methodological studies offered by the university of applied science (see prerequisites).

NOTE 1: The course is not for Bachelor's level exchange students. If you are an exchange student and your status have changed from Bachelor's level student to Master's level student after you have applied to LUT, please contact study administration to update your status. This should be done **before** you enroll to the course.

NOTE 2: Students in Lappeenranta campus will take the course within the Lappeenranta cohort and students in Lahti campus (students of Knowledge Management and Leadership programme, students of Strategic Sales Management programme, and students of LAB/Lahti) within the Lahti cohort.

NOTE 3: If you have conducted methodological courses (must be a course/s i.e. **completion of Thesis is not enough**) during your previous studies, those might compensate this course. The requirement for the compensation is that earlier course(s) **had at least 6 credits** and **covered both qualitative** as well as **quantitative** methodology. Please, contact teachers only if this basic requirement is fulfilled.

Study materials

EN: Lecture slides and other distributed material.
Saunders, M, Lewis, P. and Thornhill, A. (2009). Research methods for business students, 5th ed. (or later edition), FT/Prentice Hall.

Credit transfer instructions

EN: If you have conducted methodological courses (must be a course/s i.e. **completion of Thesis is not enough**) during your previous studies, those might compensate this course. The requirement for the compensation is that earlier course(s) **had at least 6 credits** and **covered both qualitative** as well as **quantitative** methodology. Please, contact teachers only if this basic requirement is fulfilled.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
¤LAB/LUT: Course Completion		6 cr

A330A0700 Consumer Behaviour in the Age of Digitalization

A330A0700 Consumer Behaviour in the Age of Digitalization

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Jenni Sipilä, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Basics in marketing and in consumer behavior.

Learning outcomes

EN: This course provides an overview of consumer behavior in digital environments such as social media, online stores, and augmented and virtual reality.
After taking the course, the students will be able to:

1. Analyze consumer behavior in digital environments from theoretical and practical perspectives.

2. Critically evaluate and develop digital marketing from the perspective of consumer behavior.

3. Understand issues of responsibility, sustainability, and ethics pertaining to consumer behavior in digital environments, and critically evaluate digital marketing from these perspectives.

4. Effectively communicate their ideas to professional audiences in video and blog formats.

5. Collaborate constructively and in a goal-oriented way in multicultural teams.

6. Search, process, and apply academic literature on consumer behavior and develop well-argued perspectives and ideas based on the literature.

7. Critically and constructively evaluate others' work on consumer behavior topics.

Content

EN: · Introduction to recent developments in consumer behavior in digital environments, including their ethical and marketing implications.
· Consumer perceptions, emotions, motivations, attitudes, and attitude change in digital environments.

· The processes and ethics of persuasion and social influence in digital environments.

· Consumer experiences and decision-making in digital environments.

· The implications of consumers' self-concept, identity, personality, and individual differences on consumer behavior in digital environments.

· Consumer behavior in groups and communities in digital environments.

· An introduction to state-of-the-art consumer research methods and their applications for studying consumer behavior in digital environments.

· The implications of digital consumer marketing to consumer well-being and sustainable consumption.

Additional information

EN: Only for MIMM and SMYM students. In addition, there is space for up to 10 students from the MSc Digital Social Sciences program.
The lectures take place in Lappeenranta. This course does not have mandatory presence requirements, but presence is highly encouraged for the best learning experience.

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The course is related to UN's Sustainable Development Goals (SDG): 12 responsible consumption and production.

Study materials

EN: Articles and other reading and study materials will be announced on the Moodle platform.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	3 cr
Course Completion		3 cr

A330A0600 Digital Marketing Certificate

A330A0600 Digital Marketing Certificate

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Heini Vanninen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: The course deepens students' understanding of the selected specialization topic through a set of MOOC based certificate courses.
At the end of this course students will be able to:

1. Become a certified user of selected digital marketing technologies, tools and tactics.
2. Demonstrate independent activity in executing the required MOOC courses.
3. Apply knowledge into practice.

Content

EN: The contents are related to contemporary specialization areas of digital marketing.

Additional information

EN: Independent online learning.

Study materials

EN: Online courses assigned by the lecturer.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	3 cr
Course Completion		3 cr
Method 2	Recurrence 1: 1. period-Summer	3 cr
Course Completion		3 cr

A310A0660 Financial Supply Management

A310A0660 Financial Supply Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Veli Matti Virolainen, Responsible teacher Suvi Tiainen, Administrative person Seray Mirasci, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: B.Sc. (Econ. ; Bus. Adm.) studies. For exchange students B.Sc. studies related to operations management, supply chain management, supply management or similar.

Learning outcomes

EN: The aim of the course is to familiarize students with the financial issues of supply management. The intended outcomes of this course are to:
- identify the impact that supply chain management decisions have on the financial statements of the organization;

- explain the relationship between supply chain management decisions on measures of firm performance;

- introduce a set of financial frameworks that are used in business to illustrate the impact that supply decisions have on the financial performance of a business.

During the course the students apply methods and tools of working capital and inventory management in hands-on assignments. After completing the course students are able to

- describe the impact that supply chain decisions have on the financial performance of the organization;

- identify how supply chain decisions impact on creating earnings, cash and value for a business;

- identify the financial impact of a supply chain decision on the profitability, liquidity and asset utilization of a business

- determine optimal lot size inventory and safety stock levels

- use relevant supplier financing tools in practice

- recognize financial ratios used to manage liquidity and working capital;

- describe the components of a working capital cycle;

- identify the initiatives organizations use to manage working capital components;

Content

EN: The financial impact of a supply chain decision on the profitability and liquidity of organizations. Components of working capital. Methods and tools for working capital and inventory management. Decision making in supply chain. The impact of cash flow on working capital management and the financial performance of a business. Means of Supplier Financing.

Additional information

EN: Students of MSM programme have first priority to participate. This course is only for master'|s level students including exchange students.

Study materials

EN: Templar, Hofmann, Findlay: Financing for End-to-End Supply Chain, newest version (e-book), Supply Chain Financing Community, Kogan Page. Other course book will confirmed later.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	6 cr
Course Completion		6 cr

A240A0060 Fuzzy Sets and Fuzzy Logic

A240A0060 Fuzzy Sets and Fuzzy Logic

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Pasi Luukka, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Bachelor level mathematics courses e.g.:
BM20A6700 Matematiikka I,, BM20A6800 Matematiikka II,
Experience in programming or using mathematical software required e.g.:
BM20A4301 Johdatus tekniseen laskentaan or BM20A5001 Principles of Technical Computing

Equivalences to other studies

CS38A0060 Fuzzy sets and fuzzy logic

Learning outcomes

EN: By the end of the course student will be able to
- understand basic mathematical concepts related to fuzzy set theory and fuzzy logic
- model uncertain concepts using fuzzy set theory
- construct fuzzy models
- deduce meaningful information from fuzzy models

Content

EN: The course consists of basics of fuzzy set theory, algebras of fuzzy sets, fuzzy quantities, logical aspects of fuzzy sets, operations of fuzzy sets, fuzzy relations, aggregation operators, common fuzzy inference systems, including Mamdani's, Larsen's and Tsukamoto inference and Sugeno model.

Additional information

EN: Replaces the course CS38A0060 and can not be included in the same degree.

Teaching Methods
Lectures 14 h, demolecture videos 7 h, exercises 14 h, 1st period. Lectures 14 h, demolecture videos 7 h, exercises 14 h, 2nd period. Independent study 92 h. Written examination. Total workload 162 h.

Assessment scale and assessment methods
0-5, examination 100 %.

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The course is related to UN's Sustainable Development Goals (SDG): 4

quality education

Study materials

EN: Klir, G., Yuan, B.: Fuzzy Sets and Fuzzy Logic. Theory and Applications, Prentice Hall, 1995.Fullér, R.: Introduction to Neuro-Fuzzy Systems, Physica-Verlag, 2000.
Ross, T.: Fuzzy Logic with Engineering Applications, Wiley, 2017.
Passino, K.M., Yurkovich, S.: Fuzzy control, Addison Wesley, 1998.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Registration		0 cr
Course Assessment		6 cr

A320A2000 Global Business Environment

A320A2000 Global Business Environment

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Igor Laine, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: Upon completion of the course Global Business Environment, students will be able to:

1. Identify the key features of the global business environment and understand the interrelations between globalization and international business.
2. Compare and analyze business environments of different economies in terms of risk and opportunity.
3. Apply relevant theories related to global competitiveness, international trade, and economic blocs.
4. Evaluate the potential of emerging markets in international business and assess associated opportunities and challenges.
5. Analyze the role of sustainable development in international business and anticipate its evolving impact.

Content

EN: Must know: how does global business environment differ from domestic business environment; the role of globalization in international business; the cultural, political, and legal environments in international business; theories of international trade and investment; government intervention and regional economic integration; understanding emerging markets as a context for international business; opportunities in and risks and challenges of emerging markets; business model innovation and adaptation in emerging markets; ethics, corporate social responsibility, sustainability and governance in international business.
Should know: PEST, PESTEL and CAGE frameworks; economic system - Liberal / controlled, monetary; Porter diamond; Vernon life cycle; shifting patterns of comparative and competitive advantage; base of the pyramid (BOP) markets; Emerging economies as sources of innovation; sustainable development goals (SDGs); Paris Accord; global warming; global governance mechanism (WTO, IMF, WB, etc.)

Additional knowledge: Flying Geese model; Global value chain (GVC)

Additional information

EN: Contact instruction at LUT Lappeenranta Campus.
This course is only for master's level students. Priority is given to MIBE programme and MIBE minor students.

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The course is related to UN's Sustainable Development Goals (SDG): 1 no poverty, 2 zero hunger, 7 affordable and clean energy, 8 decent work and economic growth, 9 industry, innovation and infrastructure, 10 reduced inequalities, 11 sustainable cities and communities, 12 responsible consumption and production, 13 climate action, 14 life below water, 15 life and land, 16 peace, justice and strong institutions, 17 partnership for the goals

Study materials

EN: Textbooks:
Cavusgil S.T., Knight G., Reisenberger J. (2024) - International Business: The New Realities, 6th edition, Pearson Education (older editions apply as well)
Wild J., Wild K. (2023) - International Business: The Challenges of Globalization, 10th edition, Pearson Education (older editions apply as well)

Additional reading and other study material will be assigned in class and in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	6 cr
Course Completion		6 cr

A210A0601 Information Systems in Corporate Management and Decision-making

A210A0601 Information Systems in Corporate Management and Decision-making

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Mahinda Mailagaha Kumbure, Responsible teacher Mikael Collan, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: For master's level students only

Learning outcomes

EN: The aim of the course is to give extensive general knowledge about corporate information systems and how they are used in corporate decision-making, business control, and as a driver of business development. After the course the students: have an understanding of the corporate information systems stack and the most common types of corporate information systems and where they are used, are able to view a business as a system and its parts as parts of a system, know how information systems can collect, summarize, and analyze corporate information, understand what the practice of fact based management is based on and how it is connected to information systems, know the concept of intelligent systems, know selected methods and tools, understand the types of results that they can provide, and the importance of such results for, for example, making the business more effective through optimization, can identify and critically analyze situations, where information systems can be used to develop business practices.

Content

EN: Core content: corporate information stack, business intelligence, big data,
Additional content : controlling in a modern corporation based on IS, intelligent systems in business process development, concepts of optimization, machine learning, neural networks, simulation, and cognitive technologies
Special content: importance of visualizing knowledge

Additional information

EN: Only for LBS and MBAN students.

Study materials

EN: Lecture slides, lecture videos, assigned video material, assigned reading, collection of articles. All materials will be available via Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	6 cr
Course Completion		6 cr

A330A0100 International Business Strategies

A330A0100 International Business Strategies

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Juha Väätänen, Responsible teacher Roman Teplov, Responsible teacher Suvi Tiainen, Administrative person
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: A330A0252 Internationalization of the Firm and Global Marketing
A320A2000 Global Business Environment

Recommended prerequisites

A330A0252 Internationalization of the Firm and Global Marketing

A320A2000 Global Business Environment

Learning outcomes

EN: The aims of the course are:

- to familiarize students with strategic planning for international business in general and the management and execution of international business strategies within the context of multinational corporations in particular;
- to help the students understand various international, regional, or global strategies and their advantages and disadvantages.

The business simulation game aims to expose the students to actual management challenges in an international context.

After completing the course, the students should be able to:

- analyse technology-intensive international marketing environment, and generate and carry out properly justified international business strategies;
- decompose the corporate strategy into functional strategies (e.g. marketing strategy, production strategy, etc.), and coordinate and critically evaluate the implemented strategies, by interpreting key financial indicators of performance;
- interpret new information critically and systematically and be able to develop ideas and projects based on this information;
- apply knowledge gained from the course, to the events, activities, and/or strategies of an actual firm or organisation;

Additionally, the students will develop the following soft transferable skills:

- work effectively in a multicultural team;
- show initiative and leadership abilities;
- manage and prioritize one's workload and time effectively;
- develop a mindset that fosters sustainability, and global, market, and technology orientation in a global business environment.
- participate in discussions on topics of international business interest, and stimulate and answer questions from a knowledgeable audience

Content

EN: Must Know:

- Strategic tools for analyzing the internal and external environment, for example, resource and product positions.
- The international business planning process and its content.
- International and global business strategies.
- Organization of resources, capabilities, and knowledge within a multinational corporation.
- Implementation methods of an international business strategy.

Should Know:

- Corporate social responsibility and sustainability
- International finance, international production, and sourcing strategies.

Nice to Know:

- The skills and application of critical inquiry into reading, discussions, issues, and experiences related to international business strategies.
- Real-life firm strategy examples (provided by guest lecturers).

Additional information

EN: Only for Master's level students. The course is intended for second-year Master's students and therefore is not recommended for Master's students starting their first year of studies (see also prerequisite courses). Please note that there might be an overlap in the schedule between this course and first-year mandatory courses.
The number of students attending the course may have to be limited based on a pre-exam if the number of students exceeds 80. In registration, priority is given to LUT School of Business and Management (LBS) Master's students and international exchange students with earlier knowledge of international business.

The course is related to UN's Sustainable Development Goals (SDG): 8 decent work and economic growth; 9 industry, innovation and infrastructure; 12 responsible consumption and production; 13 climate action.

Study materials

EN: Lasserre, P: (2012). Global Strategic Management (3rd edition or newer).
Peng, M.W. (2014). Global Strategic Management (3rd edition or newer)

Assigned reading (announced on lectures).

Guide manual for the simulation (online).

Slides from the lectures.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr

A220A0200 International Financial Management

A220A0200 International Financial Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT

Responsible organisation	LBS, Business Administration 100%
Responsible persons	Sheraz Ahmed, Responsible teacher Roman Stepanov, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Completed bachelor's level (B.Sc.) courses in finance and/or economics.

Learning outcomes

EN: After successful completion of the course, the student will be able to:
- explain the functions and goals of MNCs
- compare the challenges concerning different legal environments, tax considerations and business risks faced by MNCs
- model the relationship between exchange rates and micro- and macro-level determinants of changes in exchange rates
- distinguish the foreign exchange exposure and risks of conducting international business
- measure the impacts of exchange rates on the profitability, growth, capital structure and valuation of MNCs
- design unique business idea of an MNC and build its international business strategies
- develop team working skills in multinational environment.

Content

EN: The course is designed to provide advanced-level (Master) knowledge of multinational financial management. The course covers four areas of international financial management: 1) The International financial environment, 2) exchange rate behavior and determination of currency exchange rates, 3) exchange rate exposures and risk management, and 4) long-term asset and liability management of MNCs.

Additional information

EN: This is a master's level course therefore only eligible students can enroll.

Study materials

EN: The selected chapters of textbook and all additional material distributed by the lecturer.

Literature

Madura and Fox: International Financial Management (European edition)
https://lut.primo.exlibrisgroup.com/discovery/fulldisplay?context=L&vid=358FIN_LUT:LUT&search_scope=LUT_CAMPUS_CDI&tab=Everything&docid=alma992007786706254

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr

A330A0900 Managing International Marketing

A330A0900 Managing International Marketing

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English

Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Maria Uzhegova, Responsible teacher Olli Kuivalainen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: A330A0300 Strategic Global Marketing Management, A330A0252 Internationalization of the Firm and Global Marketing or similar courses taken elsewhere.

Learning outcomes

EN: The aim of the course is to let the students experiment with the strategic planning for international marketing
in general and management and execution of international marketing strategies within the context of multinational corporations in particular. The idea is to help the students to develop an understanding of various international or global marketing strategies and critically evaluate their advantages and disadvantages.
The assignment [simulation] aims to expose the students to actual management challenges in an international
marketing environment.

Intended learning outcomes: after completing the course the students should be able to:
* analyze international marketing environment, and to develop and carry out properly justified international marketing strategies.
* to coordinate and critically evaluate the implemented strategies, by interpreting key indicators of performance;
* plan, communicate, and carry out a group research project applied to a firm in a simulation,
* work in a multi-cultural team;
* be able to interpret new information critically and systematically and be able to develop ideas and projects based on this information;
* be able to apply knowledge gained from the course, in addition to that provided by additional reading, analysis and discussion, to the events, activities and/or strategies of an actual firm or organization;
* participate in discussion on topics of international marketing interest, and to stimulate and answer questions from a knowledgeable audience;
* develop a mindset that fosters sustainability, and global, market and technology orientation in a global business environment

Content

EN: The skills and application of critical inquiry into your reading, discussions, and situations and experiences that you encounter with regard to international marketing, both inside and outside the classroom setting. The international business planning process and its content especially related to international marketing.
International and global marketing strategies, including e.g. standardisation vs. adaptation, transfer pricing, customer portfolio management, channel strategies, sales management and sustainability. Decision-making, management, organization and control of marketing-related resources, capabilities and knowledge within a multinational corporation.
Implementation methods of an international marketing strategy. Real-life firm international marketing strategy and organisation examples (provided by guest lecturers).

Additional information

EN: Blended learning. However, please note that the lectures are held face-to-face in Lappeenranta, and active class participation is an assessed element. The simulation game is played online. There needs to be

a representative of each student team present in the simulation reflection session in the end. More information about presence requirements will be provided during the first lecture (and in a more detailed syllabus which will be provided when the course begins).
In registration the priority is given to LUT School of Business and Management Master's students and foreign exchange students with earlier knowledge of international marketing.

The course is related to UN's Sustainable Development Goals (SDGs): 8 decent work and economic growth, 9 industry, innovation and infrastructure, 12 responsible consumption and production, 17 partnership for the goals.

Study materials

EN: Peng, M.W. (2022). Global Strategy (5th edition). Assigned reading (collection of articles). Guide manual for the simulation. Slides from the lectures.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr

A320A6000 Prototype Project at J. Hyneman Center

A320A6000 Prototype Project at J. Hyneman Center

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Terhi Virkki-Hatakka, Responsible teacher Markku Ikävalko, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: 1. to know the basic concepts in prototype production, e.g. perspectives of generation and iteration
2. to know the role of customer value and user experience in prototype production
3. to understand the role of prototype production in the wholeness of an innovation process
4. to understand the role of prototype production as a part of expertise service
5. to have knowledge about different kinds of requirements of prototype production as teamwork and collaboration
6. to have knowledge about prototyping and different types of prototyping activities
7. to know the key concepts and terms used in evaluation
8. to have knowledge of different types of evaluation criteria for prototypes and prototype production methods
9. to analyze the role and importance of the prototype in the real-life context of being eventually in production.
10. to be able to plan and execute a prototype project in a given time-line
11. to be able to collaborate in teams
12. to be able to propose a solution and recommendations for next steps in prototype testing and decision making.

Content

EN: The course is based on a prototype project at J. Hyneman Center (JHC). The project is carried out mostly independently at JHC. The original initiative for the prototype building can come from students or from an outside organization.
With a high demand of self-organization and independency, the course is at advanced level.

The course applies problem-based learning to a concrete prototype development task. Students may work in appropriate size multidiscipline groups. Each group will work mostly independently and self-organizing way, and their learning objectives will be tailored on the basis of their targets in the beginning the course.

The course contains of determining the actual problem or target, the acquisition of needed knowledge and skills, determination, comparison and selection of possible different process alternatives, sketching and designing the manufacturing process, selecting needed materials and equipment, economic calculations in an appropriate level and building & testing the prototype.

The learning during the course will be presented e.g. via portfolio or reflective and comprehensive report, and presenting the results to an audience e.g. in a seminar or conference.

Additional information

EN:

Study materials

EN: Selected by project cases.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	6 cr
Course Completion		6 cr

A330A0300 Strategic Global Marketing Management

A330A0300 Strategic Global Marketing Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Olli Kuivalainen, Responsible teacher Kaarina Vieru, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: After taking the course the students should to be able to:
1. assess underlying concepts and analytically compare theoretically perspectives of marketing management strategy,
2. assess firm's internal and external environments from strategic marketing management perspective
3. describe and assess the range of marketing strategies available to organizations in a range of environmental contexts
4. describe and assess marketing programmes

5. understand the basics in marketing performance measurement
6. develop a marketing plan
7. design and deliver a professional presentation of a marketing plan.

Content

EN: Assessment of the competitiveness of the firm, assessment of the external marketing situation, STP-process, developing marketing strategies and programmes, standardization versus adaptation, relationships in value chain, budgeting, controlling, marketing plan, marketing performance measurement. Corporate social responsibility strategy, customer behavior, customer relationship management.

Additional information

EN: Only for Master's level students.
The course is related to UN's Sustainable Development Goals (SDGs): 8 decent work and economic growth, 9 industry, innovation and infrastructure, 12 responsible consumption and production, 17 partnership for the goals.

Please note that the lectures are held face-to-face in Lappeenranta. Please attend the first lecture as the groups are formed there. There are also some tasks which require compulsory physical presence in Lappeenranta such as the final presentation, and Q&A session about the project in the middle of the period. More detailed information about presence requirements will be given during the lecture, when students also need to form the cross-cultural teams for the project work (term paper and its presentation).

Study materials

EN: 1. Hollensen, Svend (2019) Marketing Management. A Relationship Approach. Fourth Edition. Pearson.2. Assigned readings.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	6 cr
Course Registration		0 cr
Course Assessment		6 cr

A330A0352 Strategic Issues in Digital Marketing

A330A0352 Strategic Issues in Digital Marketing

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Heini Vanninen, Responsible teacher Suvi Tiainen, Administrative person Jaakko Metsola, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: After the course, the student should be able to:
1. Evaluate the impacts of digitalization on the changes in market environment.

2. Understand the fundamentals, different contexts and paradigm shifts in digital marketing strategy.

3. Analyze recent digital marketing trends and provide managerial solutions through case studies.

4. Compile an academic literature review by synthesizing research findings of a topical issue in the realm of digital marketing.

Content

EN: Digital marketing strategy, digitalization and new technologies, digital transformation, AI in digital marketing, social media marketing, influencer marketing, digital content marketing, data-driven marketing.

Additional information

EN: Note
The course is only for Master's level students.

Study materials

EN: Assigned by the instructor.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	6 cr
Course Completion		6 cr

A310A0101 Strategic Supply Management

A310A0101 Strategic Supply Management

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Veli Matti Virolainen, Responsible teacher Suvi Tiainen, Administrative person Elina Mäntysaari, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: B.Sc. (Econ. ; Bus. Adm.) studies. For exchange students B.Sc. studies related to operations management, supply chain management, supply management or similar.

Learning outcomes

EN: Upon completion of the course, students will understand the strategic meaning of supply management and will be able to develop the supply function as part of the business development of an entire organization.
Students will be able to apply TCE in supply strategy formulation, recognize different types of business relations, explain the motives of supply chain integration and partnerships, and apply these in practice. After taking the course, students should be able to:

1. develop and evaluate supply management strategies in a global context

2. analyze purchasing and supply management processes as a part of a business strategy

3. explain the motives for the integration of supply chains and business partnerships

4. distinguish the modes of collaboration in supply management

5. apply transaction cost theory and game theory in strategy assessment

6. produce an analytical written report based on the current academic literature.

Content

EN: Supply management as a source of competitive advantage and as a part of a business strategy. Outsourcing and make-or buy decision. Transaction cost theory and game theory as a basis of strategic decision-making. Different relationships with suppliers and motives of partnerships.

Additional information

EN: Students of Supply Management program have first priority to participate. This course is only for master';s level students including exchange students. Blended learning is applied.

Study materials

EN: Vitasek, K.: Vested outsourcing, 2013. Palgrave, Macmillan. Kling, J., Manrodt, K., Vitasek, K., and Keith, B., Strategic Outsourcing in New Economy, 2016. Palgrave, Macmillan. Mazzucato M. (ed): Strategy for Business, 2002. Sage Publications. O'Brien, J: Category Management in Purchasing. 3rd ed. Lecture materials and journal articles. Assigned reading.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr

A310A0603 Supplier Development and Relationship Management

A310A0603 Supplier Development and Relationship Management

Abbreviation: SDRM

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Elina Karttunen, Responsible teacher Suvi Tiainen, Administrative person Sirpa Multaharju, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: B.Sc. (Econ. & Bus.Adm.) studies. For exchange students, B.Sc. studies related to operations management, supply chain management, supply management or similar.

Learning outcomes

EN:

The aim of the course is to examine the concepts of supplier development (SD) and supplier relationship management (SRM) from different perspectives. Depending of their previous studies, students can gain new knowledge and/or deepen their understanding of these topics through assigned readings and academic literature in the field. In addition to the academic perspectives, the students can gain knowledge about practical issues, such as practices of supplier relationship management and future trends of supplier relationship management.

After completing the course, the students are able to critically assess and analyze the literature and practical issues and trends related to supplier development and relationship management. Students should know the recent trends, tools and sustainability-related practices of supplier development and relationship management.

Content

EN: - The concepts and theories of supplier development and supplier relationship management including related sustainability perspectives
- Evolving trends, practices and tools of supplier development and relationship management

Additional information

EN: This full-digi self-learning course is organized twice in an academic year in Moodle: in period 3 and as a summer course.
No contact teaching: therefore the course is not listed in TimeEdit /timetable. The schedule for course assignments is available on the course's Moodle page. The teacher instructs students every week via Moodle messages.

NB! After being accepted to the SDRM course, *exchange students in particular must ensure that they use their LUT email* and can receive Moodle messages, as this is essential for completing the course."

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The course is related to UN's Sustainable Development Goals (SDG): 9 industry, innovation and infrastucture; 17 partnership for the goals.

Study materials

EN:
Educational videos. Assigned readings will be announced at the beginning of the course. In addition, independent searching of relevant and topical scientific journal articles in databases, and practical material / writings in internet.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period Recurrence 2: Summer	6 cr
Course Completion		6 cr

A310A0501 Sustainable Global Sourcing

A310A0501 Sustainable Global Sourcing

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT

Responsible organisation	LBS, Business Administration 100%
Responsible persons	Katrina Lintukangas, Responsible teacher Axel Zehendner, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: B.Sc. (Econ. ; Bus. Adm.) studies. For exchange students completed B.Sc. studies related to operations management, supply chain management, supply management or similar.

Learning outcomes

EN: The aim of the course is to familiarize students with the strategic planning of sustainable global sourcing and the management of global supply networks and the execution of sustainable supply strategies in globally active firms. The content of the course increases students' understanding on responsible business and sustainable sourcing and importance of sustainability issues in global supply chains. After taking the course, students should be able to:
1. design sustainable global sourcing strategies

2. recognize, monitor and control the sustainability risks in global supply chains

3. analyse multinational business environments and sourcing opportunities

4. assess business location decisions from sustainability point of view

5. compare the opportunities for outsourcing or re-shoring production and technologies

6. use and develop sustainability practices for supplier selection and assessment

7. critically evaluate consequences of sourcing decisions from a responsibility perspective

Content

EN: Sustainable global sourcing strategies, opportunities and challenges of international business and in global supply chains. Sustainable sourcing and the transparency of supply chains. Outsourcing, re-shoring and location decisions. Sustainability issues in supplier selection, assessment and relationship management. Sustainability risks in sourcing and in global supply chains and sustainable supply management practices.

Additional information

EN: This course is only for master's level students. Students of Supply Management programme have first priority to participate.
Blended learning is applied including on-campus activites

The course is related to UN's Sustainable Development Goals (SDG): decent work and economic growth, industry, innovation and infrastructure, responsible consumption and production

Study materials

EN: Reading package assigned in the beginning of the course and lecture materials.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	6 cr
Course Completion		6 cr

A350A0501 Sustainable Strategy

A350A0501 Sustainable Strategy

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Anni Tuppura, Responsible teacher Suvi Tiainen, Administrative person Paavo Ritala, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: This course concentrates on the topical phenomena and concepts related to the creation and development of sustainable strategy in organisations. In particular, the focus is on the intersection of firm strategy and economic, social, and environmental dimensions of sustainability. These topics are investigated both from the viewpoints of academic research and practical relevance. Students will learn to discuss and synthesize the relevant academic evidence, examine the links of contemporary topics to previous research and assess the practical relevance of the issues through concrete examples. The learning outcomes of the course are the following:

1. To assess the topic of sustainable strategy in the firm level as well as within the broader institutional context from both academic and practitioner perspectives.
2. To discuss and debate on different and conflicting perspectives regarding sustainability in business.
3. To be able to analyze the practical relevance of sustainable business strategy.

Content

EN: The content of the course is based on topical issues related to sustainable strategy from different approaches, e.g., sustainable strategy and sustainable business models, and strategic opportunities and challenges of circular and regenerative economy. Thematic lectures at the beginning of the course introduce central concepts. Interactive lectures and a seminar are organized to promote learning.

Additional information

EN: ***
The course is related to UN's Sustainable Development Goals (SDG): 8 decent work and economic growth, 9 industry, innovation and infrastructure, 12 responsible consumption and production

Study materials

EN: Textbook: Hahn, R. Sustainability Management: Concepts, Instruments, and Stakeholders, 2nd edition, Pearson.
In addition, related academic literature and lecture materials.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	6 cr
Course Completion		6 cr

A210A0610 International Corporate Governance and Financial Reporting

A210A0610 International Corporate Governance and Financial Reporting

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Juha Soininen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: The course provides an understanding on financial reporting ties with corporate governance and economic performance. Analytical framework of financial reporting and corporate performance are presented thru the needs and effects of corporate governance including the concepts of stakeholder and shareholder. More precisely the effects of ownership, dominant vs minority shareholders, corporate control and managerial compensation are presented.

After completing the course, students can critically analyze different aspects of corporate governance and financial reporting, along with their potential effects on corporate performance. Additionally, students will apply theoretical knowledge to practical tasks, enhancing their ability to solve real-world problems related to corporate governance and financial reporting.

Content

EN: Corporate governance, financial reporting, firm performance, agency theory, boards, management compensation.

Additional information

EN: This course is only for master';s level students including exchange students.
Delivery mode: Blended. The course consists of independently watched lecture recordings covering theoretical aspects and in-class exercises that apply theory to practice. There is no mandatory attendance, but participation in the exercises has a significant impact on the final grade. The final grade is based on a written exam (75%), which is based on the course literature, and active participation in the exercises (25%).

The course is related to UN's Sustainable Development Goals (SDG): 5 gender equality

Study materials

EN: Goergen, M. (2012). International Corporate Governance, 5th Edition, Pearson.
Pratt, Jamie (2011). Financial Accounting in an Economic Context, International Student Version, 8th Edition, Wiley.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	6 cr
Course Completion		6 cr

CS10A0864 Research Methods in Management

CS10A0864 Research Methods in Management

Abbreviation: RM

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Armi Rissanen, Administrative person Yan Xin, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: No prerequisites

Learning outcomes

EN: Upon completion of the course, the students will gain understating of the research process and will be able to
- conduct independent scientific and applied research in management and report the research results

- define research objectives and formulate research questions

- search and analyze literature and conduct a literature review

- understand research philosophies and approaches

- formulate research design and make a justified choice of research methods

- collect and analyze qualitative and quantitative data

- interpret and report the results of the research

Content

EN: The course aims to provide methodological support and clear guidelines to master students on how to conduct research in management and how to report its results. The course consists of lectures and seminars. Topics include but not limited to formulating and clarifying the research topics, reviewing the literature, understanding research philosophies and approaches, formulating research design and choosing research methods, collecting and analyzing quantitative and qualitative data, and writing research reports and presenting the results.
Research reports, seminar presentations, quizzes, and individual learning diaries are essential parts of course evaluation.

Additional information

EN: Amount of participants max. 50. Priority is given to the students of M.Sc. programme GMIT.
***

The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 8 decent work and economic growth, 11 sustainable cities and communities

Study materials

EN: Saunders, M., Lewis, P. and Thornhill, A. (2023). Research methods for business students, 9th ed. Harlow, England; New York: Pearson.
Lecture slides and additional materials in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr

CS30A1342 Technology and Innovation Management: project course

CS30A1342 Technology and Innovation Management: project course

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Ville Ojanen, Responsible teacher Armi Rissanen, Administrative person Kalle Elfvengren, Responsible teacher Gülfem Özmen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Basic knowledge on innovation and technology management (e.g. Bachelor in industrial engineering and management or Technology and innovation management: Introductory course).

Learning outcomes

EN: To develop in-depth understanding in focused innovation and technology management areas
To analyze, develop and plan alternative solutions for managing technology, innovations, as well as product and service portfolios in organizations

To apply relevant tools and frameworks of technology and innovation management to real-world problems in collaborative working environment

Content

EN: Processes, methods and tools of innovation and technology management: Strategic analysis methods, future studies, idea generation, concept development, decision-making support for innovation process, Quality Function Deployment, design for business model innovations. Varying contemporary themes, e.g. circularity, twin transformation, ethics in technology management.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG):
4 quality education

8 decent work and economic growth

9 industry, innovation and infrastructure

17 partnership for the goals

Study materials

EN: Joe Tidd and John Bessant. Managing Innovation – Integrating Technological, Market and Organizational Change, 7th ed. (2020), (including e-learning material), or previous editions. Lecture notes and other material announced in the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr
Method 2	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr

CS34A0551 Business Idea Development

CS34A0551 Business Idea Development

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Armi Rissanen, Administrative person Suvi Konsti-Laakso, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: In this course, business idea development is explored from theoretical viewpoint as well as from practical viewpoint. Student can explain and analyze key theoretical approaches associated to business idea development. The student learns to identify, develop and assess future-oriented business opportunities and ideas. The student can use different systematical tools and techniques related to business idea development.

Content

EN: Entrepreneurial process, opportunity theories, opportunity sources. Entrepreneurial innovation, innovativeness and creativity. Systematic idea generation and idea generation techniques.

Additional information

EN: The course is related to UNs Sustainable Development Goals (SDG) 9 industry, innovation and infrastructure.

Study materials

EN: Study materials will be articles, lecture slides, videos and reports. They will be available in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	6 cr
Course Completion		6 cr
Method 2	Recurrence 1: 2. period	6 cr
Course Completion		6 cr

CS30A1620 Artificial Inventiveness

CS30A1620 Artificial Inventiveness

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	1 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Leonid Chechurin, Responsible teacher Armi Rissanen, Administrative person Zahra Honarmand Shahzileh, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Equivalences to other studies

CS30A1641 Inventive Product Design and Advanced TRIZ

or

CS30A7390SS Inventive Product Design and Advanced TRIZ

or

CS30A7380SS Systematic Creativity - TRIZ Basics

or

CS30A7381SS Systematic Creativity - TRIZ Basics Online

or

CS30A7391SS Inventive Product Design and Advanced TRIZ Online

Learning outcomes

EN: Upon successful completion of the course the learner is expected to be able to:

- Identify inventive problems in the complex process of product development
- Apply several tools for systematic idea generation (Function modelling, Ideal final result, Function-oriented search, Contradictions analysis)
- Act step-by-step when creative and out-of-box ideas are needed

Content

EN: It is an online course for all interested in creativity, in systematic tools of ideation. The modules contain basic TRIZ (Theory for Inventive Problem Solving) tools for idea generation.
Have you ever thought why it is hard to find a new idea sometimes? How to analyze the situation where you need an out of box solution? How to deliver systematically the list of concepts to improve a product or a service?

This self-paced course includes the following modules:

1. Introduction
2. Function Definition
3. Ideal Final Result
4. Function-oriented Search
5. Contradictions

This course is a brief introduction to creativity and idea generation with elements of theory, everyday life examples and tests for self-check. If you want to dive deeper into TRIZ and tools for idea generation, we would be happy to invite you to instructor-paced Inventive Product Design and Advanced TRIZ course.

Study materials

EN: Course videos are available here .

Remember to submit your certificate in Moodle!

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-SummerSummer	1 cr
Course Completion		1 cr

CS30A0010 Technology and innovation management: introductory course

CS30A0010 Technology and innovation management: introductory course

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Ville Ojanen, Responsible teacher Armi Rissanen, Administrative person Gülfem Özmen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Equivalences (free text field)

EN: Not allowed to include in the same degree as CS30A1341 Strategic Technology and Innovation Management (which was provided last time in 2021-22).

Learning outcomes

EN: Student will be able to

- identify and understand the main innovation and technology management concepts and their linkages to innovation process, innovation and technology strategy and innovative organization
- analyze and design technology and innovation strategy of a company
- analyze the usability of various methods of innovation and technology management

Content

EN: Innovation as a core business process. Innovative organisation. Development of technology and innovation strategy. Innovation networks. Decision-making in technological and market uncertainty. Creation of new products and services. Innovation performance and learning. Sustainability and innovation.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG):
4 quality education

8 decent work and economic growth

9 industry, innovation and infrastructure

Study materials

EN: Joe Tidd and John Bessant. Managing Innovation – Integrating Technological, Market and Organizational Change, 7th ed. (2020), (including e-learning material), or previous editions. Online material.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	3 cr
Course Completion		3 cr
Method 2	Recurrence 1: 1. period	3 cr
Course Completion		3 cr

CS30A1372 Creative Design and Problem Solving

CS30A1372 Creative Design and Problem Solving

Curriculum period	2025-2026
Validity period	1 Aug 2025-31 Dec 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Armi Rissanen, Administrative person Andrzej Kraslawski, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Basic courses of management. Basic knowledge of engineering disciplines, e.g. mechanical electrical, chemical.

Learning outcomes

EN: Learning outcomes: After fulfilling all requirements of the course, the students will be able to: 1. Understand the principles of creative problem solving 2. Know the basic methods of creative design 3. Work in team during the design process 4. Apply methods of creative design to products, processes, services and business methods

Content

EN: The major subjects of the course are: Critical Reasoning: - Socratic Questions, - Dunker Diagram, - Kepner-Tregore Method; Major Steps in Problem Solving; Types of Problems; Survey of Intuitive and Structured Methods of Creativity Enhancement: - Brainstorming, - Checklists, - Morphological Analysis, - Case-based Reasoning, - TRIZ; Selection of Ideas

Study materials

EN: Course slides.Tony ProctorCreative problem solving for managers Routledge, 3rd edition, 2009H. Scott Fogler and Steven E. LeBlancStrategies for Creative Problem SolvingPrentice Hall, 3rd edition , 2013David Silverstein, Philip Samuel, Neil DeCarloThe Innovator's Toolkit: 50+ Techniques for Predictable and Sustainable Organic GrowthWiley, 2009Alexander Osterwalder and Yves PigneurBusiness Model GenerationOsterwalder and Pigneur, 2010

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Assessment		6 cr
Course Registration		0 cr
Method 2	Recurrence 1: 1. period-2. period	6 cr
Course Assessment		6 cr
Course Registration		0 cr

CS39A0221 Technology design for disability and inclusion

CS39A0221 Technology design for disability and inclusion

Abbreviation: Tech for disability

Curriculum period	2025-2026
Validity period	1 Aug 2025-31 Dec 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Armi Rissanen, Administrative person Lobna Hassan, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: The aim in this course is to
1. Draw on disability studies and introduce the students to what disability is (visual, auditory, motor, mobility, and cognitive disability as well as neurodiversity) and how it impacts the life of each disability group

2. Develop the students' capacities in how to work with people with disabilities

3. Introduce the students to some of the common approaches to accessibility and universal design

4. Develop the student’s capacity to critically reflect on society and social practices when it comes to inclusion and disability.

Content

EN: PLEASE NOTE: This course is self-study but IT HAS AN END DATE. At the moment, you are not able to complete it all year round
PLEASE ALSO NOTE: if you attended the bachelor course CS39A0210 disability & access, this course highly overlaps with it and it might not be worth it to attend it again

Approximately 1 billion people in the world live with some form of disability. This number is only expected to grow due to factors such as aging, natural disasters, and wars. While the term "disability" can be controversial, it's important to acknowledge that no one has perfect abilities or senses all the time. Neurodiversi-

ty and emotional disabilities, such as depression and ADHD, also affect a significant portion of society. Disability affects people differently, but it is a common experience that many of us face to varying degrees. It is crucial to understand disability, how to interact with people who have it, and how to promote inclusiveness.

Technology is deeply ingrained in our society, affecting nearly every aspect of our lives, from banking to healthcare. However, technology is not always accessible to people with disabilities. Touch screens can be challenging for those with motor disabilities, some offices are not equipped for wheelchairs, and information systems can be inaccessible to those with low vision. It is important to ensure that people with disabilities have equal access to technology and are included in society as citizens, employees, entrepreneurs, and caregivers.

The concept of accessibility, universal design, and design for all refers to designing technology in a way that is usable with minimal effort. Ensuring accessibility is both a moral obligation and an opportunity to improve design practices. The purpose of this course is to educate students on disability, how it impacts different groups, how to interact with people with disabilities, common approaches to accessibility, and to encourage critical reflection on society's practices surrounding inclusion and disability.

Additional information

EN: This course is related to UN's SDG goals 3 good health and wellbeing, 10 reduced inequalities 10 reduced inequalities, 11 sustainable cities and communities, 12 responsible consumption and production, and 16 peace, justice, and strong institutions

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	3 cr
Course Completion		3 cr

CS30A0810 Must-Have Math for Decision Makers

CS30A0810 Must-Have Math for Decision Makers

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Armi Rissanen, Administrative person Leonid Chechurin, Responsible teacher Viktor Dodonov, Responsible teacher Anna Kruzenshtern, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: After completing the course, students will be able to:

- perform basic operations over mathematical objects and operators: matrix, polynomial, derivative, integral, equation/inequation, differential equations, mean/variance, regression, etc.
- know basic optimization strategies
- code/operate the above mentioned in MATLAB and/or Python

Content

EN: Basics of linear algebra, probability theory, differential equations and optimization, programming in MATLAB-Simulink and Python

Study materials

EN: Course materials are given in Moodle together with lectures, quizzes, assignments, additional materials.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-4. period	3 cr
Course Completion		3 cr

CS30A0820 The Dark Side of Sustainability

CS30A0820 The Dark Side of Sustainability

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Armi Rissanen, Administrative person Deniz Turkcu, Responsible teacher Nina Tura, Responsible teacher
Study level	Other studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: The aim of the course is to familiarize students with the discussions on the negative consequences of sustainability initiatives. Through its content, the course aims to enhance students' comprehension of how efforts towards sustainability within civil, corporate and governmental spheres can inadvertently lead to unwanted outcomes. Despite often being depicted as mutually beneficial solutions for addressing sustainability challenges, these efforts may contribute to environmental, social, and economic harm within organizations and systems and impede broader transitions towards sustainability. After taking the course, students should be able to:
-Gain insight into how sustainability efforts can result in unsustainable outcomes

-Acquire skills to critically evaluate sustainability initiatives

-Develop strategies to address and prevent potential negative consequences of sustainability efforts

- Learn key concepts and academic theories related to "the dark side of sustainability" topics

- Apply learned concepts and theories to real-life case studies across various sectors, facilitating practical understanding and application

Content

EN: Main aim of the course is to help students learn and understand the unintended negative consequences of sustainability initiatives of different stakeholders and familiarize students with the emerging concepts and frameworks related to the dark side of sustainability literature. Students will learn to analyze the actions of different actors that may result in the mentioned unintended consequences as well as how to prevent and mitigate them. The course aims to enhance the development of students' critical thinking,

collaboration, communication, reporting, strategic action, case study analysis and systems thinking skills to be used in future decision-making.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDGs): 12 Responsible Consumption and Production, 13 Climate Action, 9 Industry, Innovation and Infrastructure, 11 Sustainable Cities and Communities, 8 Decent work and Economic Growth, 10 Reduce Inequality within and among Countries

Study materials

EN: Case studies, academic articles, reports, videos and online lectures

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	3 cr
Course Completion		3 cr

CS40A0170 Interdisciplinary Course on Sustainable Finance

CS40A0170 Interdisciplinary Course on Sustainable Finance

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5-6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Industrial Engineering and Management 100%
Responsible persons	Armi Rissanen, Administrative person Marko Torkkeli, Responsible teacher Maria Nemilentseva, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: After having completed the course, student are able to:
- explain UN Agenda 2030 and 17SDGs, discuss various perspective of sustainability-related issues and analyse own sustainability-related decision-making situations

- discuss and argue the role of technology and innovation in development of new products and sustainable development

- define key concepts of finance

- define Sustainable Finance and analyse the principles of sustainable finance, including ESG factors

- know sustainable finance regulation and frameworks

- understand corporate sustainability and reporting

- differentiate innovative financial instruments and assess the effectiveness of sustainable finance initiatives

- assess the role of technological integration in sustainable finance

Content

EN: The Interdisciplinary course on Sustainable Finance aims to bridge the gap between engineering and business students to develop transdisciplinary skills necessary to solve sustainable finance issues. The course includes the next parts: 1) 21-day challenge (compulsory for 6 ECTS); 2) Principles of Finance (for Engineering students) **OR** Technology and Innovation for Sustainability (for business students); Quantitative analysis; 3) In-depth focus on Sustainable Finance

Additional information

EN: This is a transdisciplinary course on Sustainable Finance that aims to provide knowledge on sustainable development and sustainable finance to both engineering and business (finance) students.
The course is fully online without onsite lectures.

Study materials

EN: Lecture slides, videos and other distributed material.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	5-6 cr
Participation in teaching		5-6 cr

YTS010600 Economy and Society

YTS010600 Economy and Society

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Edemilson Cruz Santana Junior, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

Prerequisites

EN: Students from fields beyond social science are welcome. Priority is given to business, economics, development studies, international relations, and humanities (communication, philosophy, arts, history, etc).

Learning outcomes

EN: After completing this course, the students will:

- Understand the social nature of economic reality
- Understand the economy within changing cultural and institutional settings, political conflicts, disputes around values and ideas, and social behaviors
- Know the key topics and concepts in economic sociology and political economy from a critical perspective
- Know the main economic controversies of modernity and the core theories on the relationship between capitalism and democracy
- Understand the relationship between technology, innovation and the economy

Content

EN:

- The social character of the economy: core topics in economic sociology, political economy and heterodox economics
- The origin and peculiarities of the capitalist economic system
- The importance of innovation and technology
- Capitalism and democracy: the role of politics in a liberal economic order
- Welfare states and markets: the limits of state regulation and social control of the capitalist economy
- The relationship between the capitalist market economy and modern culture: behaviors, values, ideas and institutions

Additional information

EN: Only for students of MSc programme in Digital Social Science and Sociotechnical Systems and Sustainability Transitions.
***

The course is related to UN's Sustainable Development Goals (SDG):

1 no poverty

2 zero hunger

3 good health and well-being

4 quality education

5 gender equality

8 decent work and economic growth

9 industry, innovation and infrastructure

10 reduced inequalities

11 sustainable cities and communities

12 responsible consumption and production

13 climate action

16 peace, justice and strong institutions

17 partnership for the goals

Study materials

EN:

- Blyth, Mark (2013). Austerity: The History of a Dangerous Idea. Oxford University Press.
- Foucault, Michel (2008). The Birth of Biopolitics. Palgrave.
- Friedman, Milton (2002 [1962]). Capitalism and Freedom. University of Chicago Press.
- Harvey, David (2003). The New Imperialism. Oxford University Press.
- Hayek, Friedrich August (1967 [1950]). Studies in Philosophy, Politics, and Economics. The University of Chicago Press.
- Hayek, Friedrich August (2002 [1968]). Competition as a Discovery Procedure. In: Quarterly Journal of Austrian Economics, Vol. 5, No. 3, 9–23.
- Kalecki, Michal (1971 [1943]). Selected Essays on the Dynamics of the Capitalist Economy. Cambridge University Press.
- Keynes, J. M. (1937). The General Theory of Employment. The Quarterly Journal of Economics, Feb, 209-223.
- Keynes, John Maynard (2012 [1936]). The General Theory of Employment, Interest and Money. Cambridge University Press.
- Kindleberger, Charles P.; Aliber, R. Z. (2005). Manias, Panics and Crashes. Palgrave Macmillan.

- Locke, John (2016 [1698]). Second Treatise of Government and A Letter Concerning Toleration. Oxford University Press.
- Marx, Karl (1969 [1898]). Value, Price, Profit. International Co., Inc.
- Marx, Karl (1992 [1867]). Capital, V. I. Penguin. Part 8, Chapters 26, 27, 31, 32.
- Minsky, Hyman P. (2008). Stabilizing an Unstable Economy. McGraw-Hill.
- Perez, C. (2002). Technological Revolutions and Financial Capital. Edgar Elgar.
- Polanyi, Karl (2001 [1944]). The Great Transformation: The Political and Economic Origins of Our Time. Beacon Press.
- Schumpeter, J. (2003 [1942]). Capitalism, Socialism, and Democracy. Routledge.
- Smith, Adam (1977 [1776]). The Wealth of Nations: An Inquiry into the Nature and Causes of the Wealth of Nations. University of Chicago Press.
- Streeck, Wolfgang (2014). Buying Time: The Delayed Crisis of Democratic Capitalism. Verso.
- Weber, Max (2005 [1904]). The Protestant Ethic and the Spirit of Capitalism. Routledge.
- Wood, Ellen Meiksins (1995). Democracy Against Capitalism. Cambridge University Press.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	5 cr
Course Completion		5 cr

YTS011400 Introduction to sociotechnical food, energy and water systems

YTS011400 Introduction to sociotechnical food, energy and water systems

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Jenny Rinkinen, Responsible teacher Hannele Toivonen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

Prerequisites

EN: Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master’s program.

Learning outcomes

EN: After completing this course, the students will be able to:

- Understand the sociotechnical nature and the interconnectedness of food, energy, and water systems
- Apply and compare key theoretical approaches to studying sociotechnical systems
- Analyse examples of sociotechnical change in food, energy, and water systems and their implications for resource use and sustainability
- Evaluate how infrastructures, technologies, and governance shape and transform social practices related to consumption, production, and resource use

Content

EN:

- Key theories and approaches for understanding sociotechnical systems
- Characteristics of food, energy, and water sectors from a sociotechnical perspective
- Dynamics and examples of sociotechnical change and system evolution, including the co-evolution of infrastructures, technologies, practices, and governance, and their implications for sustainability
- Governance and future challenges of the water-energy-food nexus for understanding sociotechnical systems

Additional information

EN: Only for students of MSc programme in Sociotechnical Systems and Sustainability Transitions.
***

The course is related to UN's Sustainable Development Goals (SDG): 12 responsible consumption and production, 13 climate action, 9 industry, innovation and infrastructure, 7 affordable and clean energy, 6 clean water and sanitation

Study materials

EN: The literature will be announced at the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	5 cr
Course Registration		0 cr
Course Assessment		5 cr

YTS012100 Introduction to sociotechnical food, energy and water systems, workshop

YTS012100 Introduction to sociotechnical food, energy and water systems, workshop

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Jenny Rinkinen, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

Prerequisites

EN: Bachelor's degree or alike in an appropriate field in the social sciences or communication sciences that gives eligibility to enrol into the master’s program.

Learning outcomes

EN: After completing this course, the students will be able to:

- Identify, describe, and critically assess challenges in food, energy, and water systems
- Apply relevant theories and methods to analyse challenges in food, energy, and water systems

- Develop novel research questions and design theoretical and methodological ways to answer them
- Apply their expertise to suggest solutions and effectively communicate sustainability-related issues to key audiences

Content

EN:

- Main sustainability challenges in food, energy, and water systems
- Solution-oriented approach to steering change in food, energy, and water systems
- Real-world examples of governance, policy, management and cooperation between different actors
- Methodological approaches to study and analyse sociotechnical food, energy, and water systems
- Group work focused on solving real-world sustainability challenges in food, energy, and water systems, with emphasis on communication and reporting

Additional information

EN: Only for students of MSc programme in Sociotechnical Systems and Sustainability Transitions.
***

The course is related to UN's Sustainable Development Goals (SDG): 12 responsible consumption and production, 13 climate action, 9 industry, innovation and infrastructure, 7 affordable and clean energy, 6 clean water and sanitation

Study materials

EN: The literature will be announced at the beginning of the course

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	5 cr
Course Completion		5 cr

YTS011000 Political Economy of Digital Transformation

YTS011000 Political Economy of Digital Transformation

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Edemilson Cruz Santana Junior, Responsible teacher
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

Prerequisites

EN: Students from fields beyond social science are welcome. Priority is given to business, economics, development studies, international relations, and humanities (communication, philosophy, arts, history, etc).

Learning outcomes

EN: After completing this course, the students will:

- Understand the core socio-economic processes in the context of digitalisation
- Know the key concepts of political economy and critical social science analysis of digitalisation
- Understand the key processes of emergent social dynamics of the digital economy
- Understand the dimension of power and inequality in digital transformation
- Understand how digital transformation reconfigures economic activities and changes the social and economic relationships between different groups and classes

Content

EN:

- The intertwined relations between macro-social and macro-economic processes in the digital economy: digitalisation, datafication, platformsation, and financialization
- Data and digital platforms: the role of Big Tech companies
- Labor, automation and AI
- The geopolitics of digital economy
- Disputes around the definition and regulation of the new digital economic activities and sectors
- Refiguration of social classes and economic production
- Vigilance, social control and old/new asymmetries and inequalities of power in digital society

Additional information

EN: Only for students of MSc programme in Digital Social Science.
***

The course is related to the UN's Sustainable Development Goals (SDG):

1 no poverty

2 zero hunger

3 good health and well-being

4 quality education

5 gender equality

8 decent work and economic growth

9 industry, innovation and infrastructure

10 reduced inequalities

11 sustainable cities and communities

12 responsible consumption and production

13 climate action

16 peace, justice and strong institutions

17 partnership for the goals

Study materials

EN:

- Arthur, W. B. (2011). The second economy. McKinsey Quarterly.
- Benanav, A. (2020). Automation and the future of work (chapters 1–4, pp. 1–64). London: Verso.
- Boutang, Y. M. (2012). Cognitive capitalism (chapter 3). Cambridge: Polity Press.
- Caffentzis, G. (2013). A critique of 'cognitive capitalism.' In In letters of blood and fire: Work, machines, and the crisis of capitalism (pp. 95–123). Oakland: PM Press.
- Cesarino, L. (2020). How social media affords populist politics: Remarks on liminality based on the Brazilian case. Trabalhos em Linguística Aplicada, 59(1). https://doi.org/10.1590/010318136861916202004l0

- Cesarino, L., & Nardelli, P. H. J. (2021). The hidden hierarchy of far-right digital guerrilla warfare. Digital War, 2, 16–20. https://doi.org/10.1057/s42984-021-00032-3
- Couldry, N., & Mejias, U. A. (2019). The costs of connection (chapter 1). Stanford: Stanford University Press.
- Coyle, D. (2018). Practical competition policy implications of digital platforms. Working Paper. Cambridge: Bennett Institute for Public Policy.
- Crawford, K., & Joler, V. (2018). Anatomy of an AI system. Anatomy of an AI System.
- d'Alva, O. A., & Paraná, E. (2024). Official statistics and big data in Latin America: Data enclosures and counter-movements. Big Data & Society, 11(1). https://doi.org/10.1177/20539517241229696
- Dean, J. (2020). Communism or neo-feudalism? New Political Science, 42(1), 1–17.
- Dyer-Witheford, N., Kjosen, A. M., & Steinhoff, J. (2019). Inhuman power: Artificial intelligence and the future of capitalism (chapter 1). London: Pluto Press.
- Gerbaudo, P. (2018). Social media and populism: An elective affinity? Media, Culture & Society, 40(5), 1–9.
- Gerbaudo, P., De Falco, C. C., Giorgi, G., Keeling, S., Murolo, A., & Nunziata, F. (2023). Angry posts mobilise: Emotional communication and online mobilisation in the Facebook pages of Western European right-wing populist leaders. Social Media + Society, 9(1). https://doi.org/10.1177/20563051231163327
- Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. Academy of Management Annals, 14(1), 366–410.
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Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	5 cr
Course Completion		5 cr

VTS010450 Introduction to Communication Studies

VTS010450 Introduction to Communication Studies

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Iina Hellsten, Responsible teacher Tarja Pettinen, Administrative person
Study level	Advanced studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

Learning outcomes

EN: Can describe the development of communication studies as an academic field
Can apply communication studies theories to current issues

Can compare the strengths and weaknesses of communication studies theories

Content

EN: The course consists of two parts. The first part of the course focuses on Communication Sciences as part of the Social Sciences, History and Philosophy of Communication Sciences, and sub-fields of Communication Sciences (e.g. corporate communication and science communication). The second part delves into theories in communication sciences, such as Framing theory; Agenda-setting theory, and Uses and gratifications.

Additional information

EN: ***
The course is related to the UN Sustainable Development Goals (SDG): Not relevant

Study materials

EN: Course literature is a set of articles to be announced in the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	5 cr
Course completion		5 cr

K200CE69 Finnish 1

K200CE69 Finnish 1

Abbreviation: K200CE69

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT

Responsible organisation	LAB, language 100%
Responsible person	Sanna Paunonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to - identify and use the course vocabulary and phrases for common everyday situations - tell about oneself and understand basic questions - read and write simple sentences related to the course topics.

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

K200CE70 Finnish 2

K200CE70 Finnish 2

Abbreviation: K200CE70

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sanna Paunonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to - communicate in most common everyday situations - understand slowly and clearly spoken Finnish when the topic and the vocabulary are familiar - understand and write a simple message or text - use the basic vocabulary and some grammatical structures of Finnish.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

K200CH62 Finnish 3

K200CH62 Finnish 3

Abbreviation: K200CH62

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tarja Saarnisto, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

K200CH63 Finnish 4

K200CH63 Finnish 4

Abbreviation: K200CH63

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tarja Saarnisto, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

K200CL50 Finnish for Work 1

K200CL50 Finnish for Work 1

Abbreviation: K200CL50

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
¤LAB/LUT: Course Completion		5 cr

K200CG35 Finnish for Work 2

K200CG35 Finnish for Work 2

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
¤LAB/LUT: Course Completion		5 cr

K200CP86 Finnish for Work 3

K200CP86 Finnish for Work 3

Abbreviation: K200CP86

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level B1 The students will be able to - communicate in informal and formal discussions at work - communicate in customer service and complaint situations - compose work-related e-mail messages.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
¤LAB/LUT: Course Completion		5 cr

KM00CO04 Finnish Culture and Society

KM00CO04 Finnish Culture and Society

Abbreviation: KM00CO04

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr

Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jaana Häkli, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to - work and live in Finland or with the Finns without major cultural conflicts. - use the basic information on Finnish history, society, design, welfare state, identity and nature etc. to understand values, customs and habits in Finland. - get deeper cultural experiences in Finland through functional and experiential activities and visits related to Finnish culture.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

K200CU41 Suomi with Love 1

K200CU41 Suomi with Love 1

Abbreviation: K200CU41

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sanna Paunonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to - identify and use the course vocabulary and phrases for common everyday situations - tell about oneself and understand basic questions - read and write simple sentences related to the course topics. Proficiency level: A1

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

K200DE18 Suomi with Love 2

K200DE18 Suomi with Love 2

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible persons	
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

K200CS72 Independent study in Finnish

K200CS72 Independent study in Finnish

Abbreviation: K200CS72

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	English, Finnish
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sanna Paunonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level B1 The students will be able to - read a text in his/her field in order to understand its main idea - use the most important Finnish concepts in his/her field both in speech and in simple texts - knows enough vocabulary in his/her field to be able to follow a lesson or lecture in Finnish and understand its main points - make use of tools to explain new concepts - can plan language learning independently and assess his/her own progress.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		2 cr
¤LAB/LUT: Course Completion		2 cr

KE00BZ84 English for Professional Development (Business)

KE00BZ84 English for Professional Development (Business)

Abbreviation: KE00BZ84

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tessa Laba, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2 Students are able to communicate clearly and effectively in different generic and field-specific work place situations both orally and in writing; find, evaluate and use information effectively and function collaboratively in international working environments.

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		4 cr
¤LAB/LUT: Course Completion		4 cr

KE00BZ85 English for Professional Development (Technology)

KE00BZ85 English for Professional Development (Technology)

Abbreviation: KE00BZ85

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT

Responsible organisation	LAB, language 100%
Responsible persons	Hwei-Ming Boey, Responsible teacher Olesya Kullberg, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2 Students are able to communicate clearly and effectively in different generic and field-specific work place situations both orally and in writing; find, evaluate and use information effectively and function collaboratively in international working environments

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		4 cr
¤LAB/LUT: Course Completion		4 cr

KE00CG81 Business Writing

KE00CG81 Business Writing

Abbreviation: KE00CG81

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tessa Laba, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2 The student is able to: - interpret business transaction documents - use field-specific business terminology and style of writing - prepare clear and accurate business messages in correct English - prepare explicit and effective texts for use within and outside the organization, and to meet the communicative needs.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KE00BZ81 Academic Writing

KE00BZ81 Academic Writing

Abbreviation: KE00BZ81

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Anneli Rinnevalli, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2-C1 Students are able ·to identify the characteristics of academic writing ·to demonstrate their proficiency in applying academic writing conventions, both generic and discipline-specific, to their writing ·to demonstrate their ability to critical thinking and analysis ·to demonstrate ability in collaborative situations ·to produce a 6-page academic paper in pairs or in groups of three

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KE00CG33 Writing for Digital Media

KE00CG33 Writing for Digital Media

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Hamid Guedra, Responsible teacher
Study level	Basic studies

Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		4 cr
¤LAB/LUT: Course Completion		4 cr

KE00CQ38 Introduction to Copywriting

KE00CQ38 Introduction to Copywriting

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Vesa Koskela, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		2 cr
¤LAB/LUT: Course Completion		2 cr

KE00CG79 Professional Reading

KE00CG79 Professional Reading

Abbreviation: KE00CG79

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%

Responsible person	Matti Mäkelä, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2 Students are able to - comprehend, analyze and summarize authentic professional texts in English - learn and master strategies for expanding professional vocabulary - use strategies for effective reading.

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KE00CQ81 Effective Presentations

KE00CQ81 Effective Presentations

Abbreviation: KE00CQ81

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Riitta Gröhn, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B2 Students are able to - plan, prepare and execute a persuasive and engaging presentation - use intonation and stress to amplify their message - use various delivery techniques such as pacing, chunking and repetition - design and use visual materials effectively in their presentation.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		2 cr
¤LAB/LUT: Course Completion		2 cr

KE00BZ82 Professional Meetings and Discussions

KE00BZ82 Professional Meetings and Discussions

Abbreviation: KE00BZ82

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Mohammad Etedali, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		4 cr
¤LAB/LUT: Course Completion		4 cr

KE00BX35 English Pronunciation

KE00BX35 English Pronunciation

Abbreviation: KE00BX35

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	1 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Samu Lattu, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Students understand various English dialects and know about their special features. Students are able to pronounce English clearly

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		1 cr
¤LAB/LUT: Course Completion		1 cr

KE00CC64 English Prep Course

KE00CC64 English Prep Course

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible persons	Anneli Rinnevalli, Responsible teacher Sari Turppo, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Additional information

EN: Note. The course is not accepted in LUT university's degrees' compulsory language studies. It can however be included in free elective studies.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KE00DG83 English and AI: Terminology, Ethics and Writing

KE00DG83 English and AI: Terminology, Ethics and Writing

Abbreviation: KE00DG83

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	1 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Hamid Guedra, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Learning outcomes

EN: You are able to:

- define and use key terms of AI in English
- identify AI risks and key points of AI ethics in English
- use AI tools responsibly for professional writing in English

Completion method and assessment items	Recurrence	Credits
Method 1		1 cr
¤LAB/LUT: Course Completion		1 cr

KD00CH39 German 1

KD00CH39 Saksa 1

Abbreviation: KD00CH39

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The students will - understand slow and clear speech related to course topics - are able to communicate orally and in writing in simple everyday situations, such as introductions, telling about oneself and reacting e.g. in dining situations - are able to use the most frequent basic structures CEFR level A1

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KD00CH40 German 2

KD00CH40 Saksa 2

Abbreviation: KD00CH40

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The students will - understand slow and clear speech related to course topics - are able to communicate orally and in writing in simple everyday situations, such as telling about the family, free time and health - are able to use the most frequent basic structures. CEFR level A1

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KD00CH41 German 3

KD00CH41 Saksa 3

Abbreviation: KD00CH41

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr

Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The students will - understand clear speech related to course topics - are able to communicate orally and in writing in simple everyday situations, such as telling about the home, work and past events - are able to use the most frequent basic structures CEFR level A1

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KD00CH42 German for Work 1

KD00CH42 Työelämän saksaa 1

Abbreviation: KD00CH42

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The students will - understand speech and texts related to occupations, work and job search - are able to tell about themselves and their skills - are able communicate in basic situations related to job search CEFR level A2

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KD00CT54 German for Work 3

KD00CT54 Työelämän saksaa 3

Abbreviation: KD00CT54

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Other studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to communicate in oral interaction situations at the workplace related to e.g. company visits. The student is able to compose work-related emails. The student knows the key features of German working life.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KD00BX51 Business German

KD00BX51 Wirtschaftsdeutsch

Abbreviation: KD00BX51

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	German
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Pirjo Rantonen, Responsible teacher
Study level	Basic studies

Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: B1 The student is able to tell in German about a company, its activities and corporate finances

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KF00CH30 French 1

KF00CH30 Ranska 1

Abbreviation: KF00CH30

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	French
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sari Pärssinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After completing the course, the student - is able to use the basic structures and vocabulary necessary for work and study life introductory situations - can present oneself and tell about oneself orally and in writing. - knows the basic rules of pronunciation - knows the basic differences between formal and informal communication - is able to ask questions and express preferences. - knows the basic structures: verbs' present tense, articles, prepositions of place, prepositions à ja de, personal pronouns, structure expressing ownership, prohibition, questions, numbers 0-69. Proficiency level: A1

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KF00CH31 French 2

KF00CH31 Ranska 2

Abbreviation: KF00CH31

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	French
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sari Pärssinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After completing the course, the student - is able to use the basic structures and vocabulary necessary in work and study life situations, and to tell about his/her use of time and daily routines. - Communicate in travel situations, - tell about working / study day routines - tell time, announce plans - communicate by phone and email. - knows the basic structures: articles, question words, demonstrative adjectives and pronouns, prepositions à, de, en, present tense, reflexive verbs, near future, numbers 70-1000. Proficiency level: A1

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KF00CH32 French 3

KF00CH32 Ranska 3

Abbreviation: KF00CH32

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	French
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT

Responsible organisation	LAB, language 100%
Responsible person	Sari Pärssinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After completing the course, the student - is able to use the basic structures and vocabulary needed in work and study life situations - can tell about eating habits and order in a restaurant - is able to tell about past events, describe the appearance of people and things and compare things, - knows the difference between the formal and informal communication - knows the structures: articles, adjectives, comparison of adjectives, prepositions, personal pronouns, present, passé composé, partitive, quantitative expressions, numerals 1000 -, ordinal numbers Proficiency level: A1

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KF00CG43 French for Work 1

KF00CG43 Työelämän ranskaa 1

Abbreviation: KF00CG43

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	French
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sari Pärssinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course the student - is able to use the structures and the vocabulary needed in working interaction situations - tell about the jobs and about the working environment - is able to present the basic activities of an enterprise and describe the activities of an organization - can write formal messages - can write a CV - knows how to tell about the future and past events - knows the structures: the pronouns, the present, the imperfect tense and the future form. Proficiency level: A2

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KF00CG44 French for Work 2

KF00CG44 Työelämän ranskaa 2

Abbreviation: KF00CG44

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	French
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Sari Pärssinen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After completing the course, the student - is able to use the structures and vocabulary necessary in the most important communication situations of working life, mainly written. - is able to present optionally e.g. company / organization and products, give an elevator speech, tell about entrepreneurship, write a memo. - is able to use subjunctive and conditional Proficiency level: A2

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KP00CK94 Spanish 1

KP00CK94 Espanja 1

Abbreviation: KP00CK94

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Spanish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher

Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course the student is able to - use the structures and the vocabulary needed while presenting oneself in working and studying situations - can present himself and tell about himself in spoken and written way - knows the basic rules of pronunciation - knows the basic differences of the formal and the informal communication - is able to ask questions and tell opinions. - knows the basic structures: the Present Tense, the articles, the prepositions, the personal pronouns, the structures that indicates the possession, the negation, the interrogative sentence, the numbers 0-100 Proficiency level: A1

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KP00CH26 Spanish 2

KP00CH26 Espanja 2

Abbreviation: KP00CH26

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Spanish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course the student - is able to use the structures and the vocabulary needed in working, studying and leisure everyday situations - tell about his/her daily routines (about the family, describing persons, the hobbies, going to the restaurant and shopping, writing an e-mail message) - knows the basic structures: articles, questions words, demonstrative adjectives and pronouns, prepositions, the Present Tense, The Perfect Tense, The near Future, the numbers 100-1000 Proficiency level: A1

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KP00CH27 Spanish 3

KP00CH27 Espanja 3

Abbreviation: KP00CH27

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Spanish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course the student - is able to use tell about the living, to describe the appearance of persons and things, to compare things - can tell about the past events - knows the structures: adjectives, the comparison, the direct and indirect object pronouns, the reflexive verbs, the gerund, the numbers 1000 -, the ordinary numbers Proficiency level: A1

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KP00BX61 Spanish for Working Life 1

KP00BX61 Työelämän espanjaa 1

Abbreviation: KP00BX61

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher

Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After the course the student - is able to use the structures and the vocabulary needed in working interaction situations - tell about the jobs and about the working environment and present the basic activities of an enterprise - can write formal messages - can write a CV - knows how to tell about the future and past events - knows the structures: the pronouns, the present tense, the imperfect tenses, the future, the polite requests (the imperative) Proficiency level: A2

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KP00BX62 Spanish for Working Life 2

KP00BX62 Työelämän espanjaa 2

Abbreviation: KP00BX62

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jonna Holkeri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: After compliting the course, student - is able to communicate mainly written in Spanish in basic business situations and understand the business culture of the Spanish speaking countries. - is able to tell according to choise about, business culture, business communication, meetings, banking, applying for a job in the Spanish speaking world. - is able to use conditional, subjunctive and future. Proficiency level: A2

Additional information

EN:

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KM00BX75 Each one teach one

KM00BX75 Each one teach one

Abbreviation: KM00BX75

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Tuija Marila, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: Proficiency level: any between A1-C2 Students learn a language of their choice together with a native speaker.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		3 cr
¤LAB/LUT: Course Completion		3 cr

KE00CF69 Intercultural Competence and Communication

KE00CF69 Intercultural Competence and Communication

Abbreviation: KE00CF69

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT

Responsible organisation	LAB, language 100%
Responsible person	Derek Mitchell, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to: - understand own cultural background and its effect on behaviour and communication. - develop intercultural competence and intercultural communication skills to be able to act effectively in global organizations and cross-cultural environments. - recognize cross-cultural differences and work with them. - understand culture adaptation and adjustment for exchange purposes. - understand the basic concepts of global citizenship and diversity.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
¤LAB/LUT: Course Completion		5 cr

KE00CH94 Diversity Management and Global Citizenship

KE00CH94 Diversity Management and Global Citizenship

Abbreviation: KE00CH94

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LAB, language 100%
Responsible person	Jaana Häkli, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Humanities

Prerequisites

EN: Details available in Completion methods under the header Teaching

Learning outcomes

EN: The student is able to: - understand different concepts of diversity and inclusion in the workplace and their impact on organizations - understand cultural differences in management and leadership - recognize the benefits of managing diversity in organizations - lead diverse individuals and teams - understand global impacts of their own actions and the importance of a global mindset in today’s world.

Study materials

EN: Details available in Completion methods under the header Teaching

Completion method and assessment items	Recurrence	Credits
Method 1		5 cr
¤LAB/LUT: Course Completion		5 cr

A380A0320 Applied Consumer Behaviour

A380A0320 Applied Consumer Behaviour

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Jenni Sipilä, Responsible teacher Suvi Tiainen, Administrative person Claudio Piccolo, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Basics of marketing (Markkinoinnin perusteet).
Recommended prerequisite course for students of SIB-programme: A130A0420 Research Methods in Business Studies.

Learning outcomes

EN: After taking the course, the students are able to:
· Search and synthesize academic literature and theoretical frameworks pertaining to consumer behavior.

· Develop research questions and hypotheses based on academic literature on consumer behavior.

· Identify the most suitable research methods to address specific research questions related to consumer behavior.

· Collect and analyze qualitative consumer data.

· Collect and analyze quantitative consumer data using the statistics software R.

· Interpret the results of a consumer research project and reflect on their academic and practical implications.

· Work effectively and systematically on a consumer research project.

· Understand and apply the principles of academic writing to their own research reports.

· Present the results of a research project effectively to a professional audience.

Content

EN: This course provides an overview of consumer behavior as a field of research and practical skills related to consumer data collection and analysis. During the course, students will learn different methods of collecting consumer data along with practical methods of analyzing this data and interpreting results. The key contents are:
The process of conducting a systematic literature review in the field of consumer behavior. Basics of critical reading and synthesis of academic literature. Key theoretical frameworks and their applications in the field

of consumer behavior. The process of developing research questions and hypotheses pertaining to consumer behavior.

Basics of qualitative and quantitative research methods in the field of consumer behavior. The process of collecting and analyzing qualitative consumer data (interviews). The process of collecting and analyzing quantitative consumer data (experiments). Statistical analysis of consumer data with R.

Basics of academic writing and reporting of research results. The process of working on a consumer research project as a team. The process of preparing and conducting a presentation of a consumer research project to a professional audience.

Additional information

EN: The lectures and seminars require physical presence in Lappeenranta.
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The course is related to UN's Sustainable Development Goals (SDG): 12 responsible consumption and production.

Study materials

EN: The reading and study materials will be distributed via Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr

A130A0620 Basics in MS Excel for Business Students

A130A0620 Basics in MS Excel for Business Students

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Sanna Heinänen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: No preliminary studies required. Basic knowledge of MS Excel recommended.

Learning outcomes

EN: By the end of the course, students are able to use and develop basic functions for data analysis relating to business studies and needs.

Content

EN: The course is based on independent study and can be carried out any time during the academic year. During the course, students are learning the basics of MS Excel for business studies. The course includes self-learning videos and documents as well as web-based exercises. The topics include formatting, draw-

ing graphs, basic mathematic formulas, lookup formulas and working with pivot tables and dashboard. The course does not require preliminary studies. The basic knowledge of MS Excel recommended.

Study materials

EN: Course materials

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	3 cr
Course Completion		3 cr
Method 2	Recurrence 1: 1. period-Summer	3 cr
Course Completion		3 cr

A380A0131 Business Relationships in International Value Networks

A380A0131 Business Relationships in International Value Networks

Abbreviation: A300CE15

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Axel Zehendner, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: B.Sc. (Econ. ; Bus. Adm.) General studies

Learning outcomes

EN: The aim of the course is to familiarize students with different business relationships in international value networks, management of relationships and networks, and characteristics of supplier relationships and collaborative networks.
Upon completion the course students are able to

- understand the main concepts and theoretical backgrounds of collaboration and networks

- analyze the benefits and challenges of relationships and networks

- define supplier relationships

- participate in the development of supplier supplier relationships.

Content

EN: - The concepts and theories of collaboration and networking
- The benefits and challenges of collaboration

- Management of collaboration and networks, and supplier relationship management

Additional information

EN: Course is available for following students:

- LUT Business School students
- exchange students in business studies
- LAB business degree students
- Engineering students with a minor in business studies

The course is organized two times in an academic year: period 2 and period 4.

Moodle-based online course.

No contact teaching: so the course does not exist in TimeEdit /timetable) The teacher contacts the students every week via Moodle messages.

NB! After being accepted to the BRIVN course especially exchange students must make sure that they use LUT email and can receive Moodle messages, which is essential for completing the course.

Please be informed that if you miss the deadline for enrolling a group for the case assignment in Moodle, you cannot continue the course. The enrolling period is one week from the beginning of the course.

***

The course is related to UN's Sustainable Development Goals (SDG): 17 partnership for the goals.

Study materials

EN: Selection of journal articles and assigned readings, teaching videos and presentations.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period, 4. period	6 cr
¤LAB/LUT: Course Completion		6 cr
Method 2	Recurrence 1: 2. period, 4. period	6 cr
¤LAB/LUT: Course Completion		6 cr

A240A0010 Introduction to Programmatic Business Analytics

A240A0010 Introduction to Programmatic Business Analytics

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Jan Stoklasa, Responsible teacher Shahid Bhat, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: A130A0350 Kvantitatiiviset tutkimusmenetelmät (Quantitative Research Methods).

Learning outcomes

EN: The course introduces business students to the core concepts of algorithmization and programming, to give the students the needed background to start using procedural and object-oriented programming languages for business analytics purposes. Specifically, after completing the course, the student will:

1. Understand the big picture of how programmatic business analytics works from the start to the end, and understand the value of data analytics in facilitating evidence-based business decision-making.
2. Be able to structure problems and break them up into subparts, that can potentially be solved or approached through already available techniques and tools. Modularization and procedural thinking will be developed during the course.
3. Be able to apply basic algorithmic structures (loops, logical conditions, recursive algorithms, sorting algorithms, ...) in general in problem solving tasks and in a chosen programming language.

As such the course aims to develop student competences and skills to be able to implement a simple, but complete data analysis process in a chosen programming language or in pseudocode for solution planning purposes. Specific examples from the business analytics context concerning, for example, data scraping, data cleaning and pre-processing, data analytics using statistical methods, data visualization and machine learning will be provided.

Content

EN: Basics of programming and algorithmic thinking and its implementation in programming languages used in practical business analytics - both procedural and object-oriented (e.g. Pseudocode, Matlab, Python, R, etc.) - and their application in business analytics problems. This involves a recap on basic statistics (e.g., linear regression) and an introduction to machine learning algorithms. The focus is heavily on hands-on learning (i.e., actual problem structuring, modularization and basics of programming) and on examining business-related problems with real world data.

Additional information

EN: Blended - on campus delivery combined with Datacamp learning platform
Other additional information

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The course is related to UN's Sustainable Development Goals (SDG): 4 quality education

Study materials

EN: Lecture slides and other presented material.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr

A320A0011 Introduction to International Entrepreneurship

A320A0011 Introduction to International Entrepreneurship

Abbreviation: IIE

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English

Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Ekaterina Albats, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Prerequisites

EN: Recommended, but not required: A370A0001 Johtamisen ja yrittäjyyden perusteet; A370A0401 Case-Course of Business; A380A6050 Introduction to International Business and Planning; A130A0550 Introduction to Organizational Behavior

Learning outcomes

EN: After completing the course, students will be able to:
1. describe the phenomenon of international entrepreneurship from theoretical and practical viewpoint

2. characterise entrepreneurial/startup culture

3. describe, evaluate and reproduce the process of international entrepreneurship (startup internationalisation process including opportunity recognition, innovation and value creation, value delivery and value capture/opportunity exploitation) in a variety of contexts

4. understand and assess challenges of international entrepreneurship in a variety of international contexts

5. evaluate, compare and select in a justified manner different internationalisation strategies for new ventures in a variety of contexts

6. demonstrate competences in using tools, primary and/or secondary data sources for strategic analysis and management of a new venture

7. able to create a business development plan and its presentation for a corporate audience with a focus on growth and internationalisation

8. discuss and self-reflect on the role of different personal skills and organisational capabilities in new venture creation and new venture management

9. collaborate in a cross-cultural team.

Content

EN: Are you considering an entrepreneurial career, work in a small, agile and rapidly growing firm or do you want to develop entrepreneurial and intrapreneurial skills? In all these cases, this course is for you! Despite the rising popularity of entrepreneurship, several challenges await every start-up already at the stages of product/service development, proof of concept and prototyping. Furthermore, multiple managerial issues constantly emerge - dealing with limited resources and fierce competition, a need to build external relations being a small firm, a need in a constant change and agility along with a mission to grow rapidly and internationally. Large firms, as employers, in turn, seek for curious candidates with intrapreneurial mindset - self-motivated, proactive, and action-oriented people who take the initiative to pursue an innovative and international product, service or project.
The course is designed in a way that every student gets a chance to understand the fundamentals of international entrepreneurship, gets a deep dive into the challenges of a start-up using a case study and to develop and test own skills in solving the case specific challenge. The students form teams to solve a complex new venture challenge of their choice. The course encourages a combination of theoretical and practical approaches to building a comprehensive understanding of international entrepreneurship. In addition to a group work on challenge solution, the course also has two individual assignments: a self-reflection assignment and an individual essay-based electronic exam.

Additional information

EN: Please note: the students who have taken A210A0702 New Venture Management cannot take this course. The course has three assignments: Individual self-reflection assignment (30 points), Group Assignment - Case Study (Presentation-10 points, Report-30 points), electronic individual exam (30 points).

Participation: the course assumes in-person, face-to-face participation as a B.Sc. level course. Participation on the group work presentation day and e-exam is mandatory.

The course is related to UN's Sustainable Development Goals (SDG): 8 decent work and economic growth, 9 industry, innovation and infrastucture, 17 partnership for the goals

Study materials

EN:

- Main Textbook: Hisrich, R., Peters, M. and Shepherd, D. (2023) Entrepreneurship 12th Edition. McGrawHill.
- Schmid, S. (2018). *Internationalization of Business*. Springer International Publishing.
- Lecture materials
- The additional reading materials from academic and business press articles (i.e., case and journal articles) will be distributed during the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr

A380A7001 Introduction to International Business

A380A7001 Introduction to International Business

Abbreviation: IIB

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Igor Laine, Responsible teacher Juha Väätänen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Equivalences to other studies

CS10A0262 International Business Essentials

Learning outcomes

EN: After successful completion of the course, students should be able to:
1. understand the notion and key concepts of international business
2. describe and discuss major theories of international business
3. identify and evaluate strategy and competitiveness in international business
4. understand and justify major decisions in international business, including decisions on market selection and entry modes

5. discuss challenges of managing multinational enterprises

Content

EN: International business theories. International competitiveness. Regional economic integration. International business strategy. Market selection and entry modes in international business. Managing multinational enterprise. International Entrepreneurship.

Additional information

EN: Contact teaching at the Lappeenranta campus. In case of reaching the maximum number of spots in the course, priority will be given to students of LBS.
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The course is related to UN's Sustainable Development Goals (SDG): 8 decent work and economic growth, 9 industry, innovation and infrastructure, 12 responsible consumption and production, 16 peace, justice and strong institutions, 17 partnership for the goals

Study materials

EN: Cavusgil S.T., Knight G., Reisenberger J., 2024, International Business: The New Realities (6th edition), Harlow, UK: Pearson Education Ltd.
Hollensen S. 2020 Global Marketing (8th edition), Harlow, UK: Pearson Education Ltd.

Additional materials will be announced in class and in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	6 cr
Course Completion		6 cr

A130A0670 Mathematics for Economics

A130A0670 Mathematics for Economics

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Olli-Pekka Hämäläinen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: After taking the course, the students should be able to:
- Estimate elemental probabilities

- Solve basic equations (polynomial, exponential, logarithmic)

- Analyze the behavior of elemental functions using equations and differential & integral calculus

- Perform basic matrix calculations and solve systems of linear equations using matrices

- Model and analyze cost, revenue and profit with functions

- Understand arithmetic and geometric series & their connection with loan and investment calculations as well as perform these calculations using different interest rates.

Content

EN: Probability theory, equation solving, functions and function behavior analysis, differentiation, integration. Linear algebra, matrix calculations, Gaussian elimination. Functions in business (cost, revenue, profit), financial applications of differential and integral calculus. Arithmetic and geometric series, loan and investing calculations.

Additional information

EN: Course is only available for students who are stydying in Bachelor's Programme in Sustainable International Business.
The course is related to UN's Sustainable Development Goals (SDG): Not relevant

Study materials

EN: Lecture materials in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Registration		0 cr
Course Assessment		6 cr
Method 2	Recurrence 1: 1. period-2. period	6 cr
Course Registration		0 cr
Midterm Exam 1		0 cr
Midterm Exam 2		6 cr

A250A0620 Fundamentals of Accounting and Finance

A250A0620 Fundamentals of Accounting and Finance

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Henri Huovinen, Responsible teacher Suvi Tiainen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN:
Upon completing this course, students will achieve the following learning outcomes:

- Establish a solid foundation in accounting and finance to support informed decision-making.
- Learn fundamental principles of financial and managerial accounting.
- Understand the financial statements and apply ratio analysis.
- Develop an understanding of cost accounting and its role in business operations.
- Gain a skillset in the valuation of major asset classes and their risk-return characteristics.

- Learn the principles of Modern Portfolio Theory and its applications in investment decisions.

Content

EN: The course covers key areas of accounting and finance, including financial and managerial accounting principles, financial statement preparation and analysis, cost accounting and budgeting, corporate finance fundamentals, valuation of cash flows and financial assets, capital structure and payout policy, risk and return concepts, short-term finance and working capital management, and long-term financial decision-making.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 16 peace, justice and strong institutions

Study materials

EN:
Lecture notes and the following recommended textbooks:

- Financial Accounting (11th Edition or newer) by Libby, Libby, and Hodge
- Managerial Accounting (17th Edition or newer) by Garrison, Noreen, and Brewer
- Principles of Corporate Finance (13th Edition or newer) by Brealey, Myers, and Allen

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	6 cr
Course completion		6 cr

A380A7010 Principles of Management and Leadership

A380A7010 Principles of Management and Leadership

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Kirsimarja Blomqvist, Responsible teacher Mariana Galvão Lyra, Responsible teacher Outi Behm, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Learning outcomes

EN: The course empowers students with the skills to make meaningful changes in the world by leading and managing organizations. Students will learn

1. to demonstrate an understanding of management functions: planning, organizing, leading, and controlling, as well as leadership styles,
2. to describe and apply concepts, theories, and practices relevant to exercising management and leadership in modern organizations,
3. to demonstrate ethical, sustainable, and socially responsible decision-making and management practices,
4. collectively map organizational management and leadership challenges, and

5. co-create solutions to manage these challenges effectively and efficiently.

Content

EN: The course focuses on planning, organizing, leading, and controlling, management theories, managerial roles, and leadership styles. The topics are discussed in a global context – global economy, free trade, sustainable business, and global south-north differences – requiring an ethical and sustainable approach to management and leadership. The course is highly interactive, connecting theory and practice through inviting industry guests as well as a team workshop carried out by an external lecturer.

Additional information

EN: Priority is given to B.Sc. of Sustainable international business programme students.

The course is part of the UN's Sustainable Development Goals (SDG): 8,9 and 17.

Study materials

EN:

- Kinicki, A., & Williams, B. K. (2024). Management: A practical introduction. McGraw-Hill.
- Lecture slides
- Additional materials: in class and Moodle

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	6 cr
Course completion		6 cr

BL10A0102 Basics of Electrical Engineering

BL10A0102 Basics of Electrical Engineering

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Pia Lindh, Responsible teacher Mehar Ullah, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Not required.

Learning outcomes

EN: Upon completion of the course the student will be able to list the most essential electric supply methods, solve simple DC and AC systems and understands how transformer and generator works. Student should be able to determine the most important end-uses of electricity, explain electricity price formation, identify applications of electrical engineering and understand their operation principles.

Content

EN: The "Basics of Electrical Engineering" course provides a comprehensive understanding of the key concepts, principles, and applications of electrical engineering. The course introduces the basic calculation of electricity with the help of, for example, Ohm's and Kirchhoff's laws. In addition, students become familiar with electromagnetic phenomena, such as electric and magnetic fields, and their interaction. In addition, the course introduces electricity production methods and examines electricity consumption in different sectors, such as industry, services and housing. Students also learn about different types of electric drives, such as different motor types and power electronics. The course also provides an overview of the operation of the Finnish electricity transmission network and the related electricity market. This gives students a holistic view of the basics of electrical engineering and their practical applications.
Use of AI applications:Artificial intelligence applications can be used according to general policies of LUT.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 7 affortable and clean energy, 13 climate action, 15 life and land.

Study materials

EN: Course material, e.g. lecture material is in the Moodle learning environment.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	2 cr
¤LUT/LAB: Course Completion		2 cr
Method 2	Recurrence 1: 1. period	2 cr
¤LUT/LAB: Course Completion		2 cr

BL20A0710 Introduction to Electrical Power Systems

BL20A0710 Introduction to Electrical Power Systems

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Jukka Lassila, Responsible teacher Juha Haakana, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: BL10A0100 Basics of Electrical Engineering and BL30A0000 Electric circuits attended.

Equivalences to other studies

BL20A0701 Introduction to Electric Power Systems

Learning outcomes

EN: Upon completion of the course the student will be able to: 1. describe the essential operating principles of an electric power system, i.e., principles of power balance and voltage control management, 2. calculate

the voltages, load currents, losses, symmetrical fault currents and costs in electric power systems, 3. describe the basic phenomena and calculation principles related to static and transient stability, 4. describe basics of electricity markets.

Content

EN: Operation of electricity market. Interconnection of electric power systems. Components and their equivalent circuits in electric power systems. Calculation of transmission and distribution networks. An overview of high voltage and equipment technology. Electricity quality factors. Basics of electricity markets.
Company co-operation

No company co-operation

Use of AI applications

AI applications can be used for understanding concepts and searching for information, taking into account the constraints of the AI in source criticism. Students have to provide the answers in weekly assignments by own produced text. Students are not allowed to present AI-generated text as their own.

Additional information

EN: Contact teaching
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The course is related to UN's Sustainable Development Goals (SDG):

7 affordable and clean energy

Study materials

EN: E-book: Electric power systems by Weedy, Brian B.
Additional learning material (lecture slides) is based on the latest research and is distributed to students in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	5 cr
Course Assessment		5 cr
Course Registration		0 cr
Method 2	Recurrence 1: 1. period	5 cr
Course Assessment		5 cr
Course Registration		0 cr

BL30A0510 Introduction to Electrical Drives

BL30A0510 Introduction to Electrical Drives

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Lasse Laurila, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Recommended: BL 10A0102 Basics of Electrical Engineering, BL30A0000 Electric Circuits completed and BL30A0300 Electromagnetism attended.

Recommended prerequisites

BL30A0001 Electric Circuits

BL30A0300 Electromagnetism

BL10A0102 Basics of Electrical Engineering

Equivalences to other studies

BL30A0500 Introduction to Electrical Drives

Learning outcomes

EN: Upon completion of the course the student will be able to describe the principles of electric motors and frequency converters and recognize terms in the field of electric drives. The student can solve simple calculation problems in the field of electric drives.

Content

EN: Operation of electromechanical and electromagnetic devices, current vector, torque. Basic types and operation principles of rotating electrical machines: general rotating field machine, DC machine, asynchronous machine, synchronous machine, reluctance machine. Energy efficient electric motor drives. Control principles: scalar, vector and direct torque control (DTC). Applications. Electrical energy storages.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 7 affortable and clean energy, 13 climate action, 15 life and land

Study materials

EN: The study materials are based on research and distributed to students in Moodle. Including lecture and exercise materials. Recommended to follow also additional material listed in Moodle and lecture materials.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	3 cr
Course Completion		3 cr
Method 2	Recurrence 1: 1. period	3 cr
Course Completion		3 cr

BL40A3010 Introduction to Electrochemical Energy Storage and Conversion Technologies

BL40A3010 Introduction to Electrochemical Energy Storage and Conversion Technologies

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Pertti Kauranen, Responsible teacher

Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Recommended prerequisites

BJ01A1011 General and Inorganic Chemistry

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	4 cr
Course Completion		4 cr

BL40A0130 Measurement and Control Systems

BL40A0130 Measurement and Control Systems

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Mohammad Khan, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Basics of differential equations, basics of complex numbers.

Learning outcomes

EN: A student will be able to:

- Assess the suitability of measurement equipment for a given application based on available information and estimate its measurement uncertainty.
- Select appropriate components for a measurement system and develop a measurement plan.
- Derive differential equation-based models for simple dynamic systems.
- Convert differential equations into state-space representations.
- Determine transfer functions from differential equations.
- Analyze the stability of dynamic systems using standard methods.
- Evaluate the dynamic behavior of first- and second-order systems and adjust their response using basic controllers.

Content

EN: Basic terms describing the static and dynamic characteristics of measurement systems, Measurement accuracy, uncertainty, sensor principles, and digitization of measurement signals, Dynamic modeling of linear systems, including transfer functions and analysis in the Laplace domain, Core concepts of control engineering, including compensators and controllers, The relationship between time and frequency domains in system analysis, Analytical methods for controller tuning, State-space representations of dynamic systems, Application of MATLAB and Simulink for solving control problems.

Additional information

EN:

- Hybrid course organized both in Lappeenranta and Lahti (locally/remotely)
- Use of AI tools: According to the university regulations
- The course is related to the UN's Sustainable Development Goals (SDG): 7 affordable and clean energy

Study materials

EN: The learning material is based on the latest research and is available to students through Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period, 1. period-2. period	5 cr
Course Registration		0 cr
Course Assessment		5 cr

BL40A1732 Digital Electronics

BL40A1732 Digital Electronics

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Lauri Järvinen, Responsible teacher Mohammad Khan, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Basic Electronics

Equivalences to other studies

BL40A1730 Digital Design

Learning outcomes

EN: By the end of this course, students will be able to:
· Explain the fundamental concepts of digital number representation and Boolean algebra.

· Design and analyze combinational logic circuits consisting of basic components like gates, multiplexers, and decoders.

· Explain the principles of sequential logic consisting of flip-flops and counters.

· Explain the basics of processor operating principles, architecture,

· Explain embedded systems, including common peripherals and memory types.

· Describe programmable logic devices and their applications.

· Design, simulate, and implement simple digital systems.

Content

EN: Digital representations and number systems. Logic circuit implementation, gates, sequential logic. Memory and processor architecture basics. Embedded systems with microcontrollers and I/O interfaces. Programmable logic devices.

Additional information

EN:

- Course is related to the UN Sustainable Development Goals (SDG): 7 affordable and clean energy
- Use of AI applications should be according to the university regulations.

Study materials

EN: The learning material is based on the latest research and is distributed to students in Moodle

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	3 cr
Course Registration		0 cr
Course Assessment		3 cr
Method 2	Recurrence 1: 1. period-2. period	3 cr
Course Registration		0 cr
Course Assessment		3 cr

BL40A5000 Principles of C-Programming

BL40A5000 Principles of C-Programming

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Electrical Engineering 100%
Responsible persons	Minna Loikkanen, Administrative person Mehar Ullah, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: No any prerequisite required for this course

Equivalences to other studies

LES10A110 Principles of C-programming

Learning outcomes

EN: Student who successfully complete the course will demonstrate the following outcomes:

1. Applies basic concepts, such as flow control, loops, understands concepts of procedural and object-oriented programming;
2. Understands basic commands, data types/structures, and libraries;
3. Structures the program to make it efficient, understandable, maintainable, and extendable;
4. Understands memory management principles such as static or dynamic allocation;
5. Understands fundamentals of computer architecture and is familiar with von Neumann architecture.
6. Understands disassembly listings of C programs and can debug programs execution using the listing and step by step tracing in a debug/simulated environment.
7. Understands operations occurring in linking process and can read and modify existing link scripts for gcc linker.

8. Understands file handling (opening, reading, writing and closing files)

Content

EN: Introduction to C-programming , syntax, variables, data types, data structures, flow control, loops, functions, pointers and memory management, file input/output, string operations, memory management, good programming practices, make, gcc, core principles of computer architecture and RISC-V assembler, file handling

Additional information

EN:

- The course is related to UN's Sustainable Development Goals (SDG): 7 affordable and clean energy, 9 industry, innovation and infrastructure, 11 sustainable cities and communities
- There might be slight changes in course contents during the course according to the requirements
- Course will be in person at Lappeenranta campus and if needed will be streamed to the other campuses.
- AI tools can only be used according to the university rules (https://elut.lut.fi/en/completing-studies/rules-and-regulations/ai-based-tools-policies)

Study materials

EN: Lecture slides, video materials in Moodle, book "Modern C for Absolute Beginners second edition by Slobodan Dmitrovic"

Literature

Lecture slides will be used in Moodle and also we will use some videos to explain different topics. The book used in this course is "Modern C for Absolute Beginners second edition by Slobodan Dmitrovic" and is available on the LUT.primo "https://lut.primo.exlibrisgroup.com/view/action/uresolver.do?operation=resolveService&package_service_id=4138188870006254&institutionId=6254&customerId=6245&VE=true".

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	3 cr
Course Completion		3 cr

BH20A0720 Engineering Thermodynamics

BH20A0720 Engineering Thermodynamics

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	6 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Energy Technology 100%

Responsible persons	Minna Loikkanen, Administrative person Srujal Shah, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: After completing the course students are familiar with basic concepts in energy technology, such as temperature, state properties, systems and processes, control volume analysis, different forms of energy and fundamental laws of thermodynamics. Students are able to use different charts and tables to find thermodynamic properties of different substances. After completing the course students can formulate the equation for the conservation of energy for an open control volume. Students are able to calculate heat, work and entropy change in ideal gas compression. Students understand the working principle of a heat engine and importance of Carnot-efficiency as a limit for the theoretical maximum efficiency of any heat engine. Students can apply fundamental laws and equations of thermodynamics for studying different processes (especially related to energy and environmental technology). Students are able to calculate basic heating and air-conditioning processes. Students understand working principle of heat pump and refrigeration systems and can calculate operational values of such processes. Students understand working principle of different energy conversion processes and can solve simple internal combustion engine, gas turbine and steam power processes.
Completion of the course supports the development of the following generic competences for working life: mathematics and natural sciences, practical application of theories, working independently, problem solving, and time management and prioritizing tasks.

Content

EN: Basic concepts: state, process, system. Thermodynamical properties, ideal and real gas laws. The first law of thermodynamics, concepts, energy, work, heat, internal energy. Expansion and compression work for isothermal, isentropic and polytropic processes. The second law of thermodynamics, Carnot-process, heat engines, isentropic efficiency. Thermoeconomics, exergy. Ideal gas mixtures, heating, ventilation and air-conditioning processes, refrigeration and heat pump systems, energy conversion processes: internal combustion engine, steam power plant, gas turbine process. Course includes Power-to-X themes.

Additional information

EN: Note
Parallel to Course BH20A0750 Engineering Thermodynamics (in Finnish), common exams, mid-term exams and exercises, separate lectures.

The course is related to UN's Sustainable Development Goals (SDG): 7 Affordable and Clean Energy, 9 Industry, Innovation and Infrastructure, 11 Sustainable Cities and Communities, 13 Climate Action

Study materials

EN: Online material on Moodle, 'Thermodynamic tables' handout, enthalpy and entropy chart for steam. The relevant parts of Moran, M.J. ; Shapiro, H.N.: Fundamentals of Engineering Thermodynamics, 5th ed. 2004 or later.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	6 cr
Course Completion		6 cr
Method 2		6 cr
Course Completion		6 cr

BH10A1900 Fundamentals of Energy Technology

BH10A1900 Fundamentals of Energy Technology

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Energy Technology 100%
Responsible persons	Minna Loikkanen, Administrative person Ahti Jaatinen-Värri, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: Upon completion of the course a student 1. Understands the laws of thermodynamics and apply thermal properties, 2. understands the fundamentals of fluid mechanics and is able to solve typical problems, 3. Has understanding of the basics of heat transfer and is able to solve typical problems, 4. understands the different power generation technologies and is be able to calculate material and energy balances, and 5.
Independently study and follow progress of energy technology.
Completion of the course supports the development of the following generic competences for working life: know-how on own field, mathematics and natural sciences, practical application of theories, working independently,

Content

EN: Thermodynamics: basic concepts, thermodynamic properties, conservation equations, open system energy analysis, 1st and 2nd law of thermodynamics, thermodynamic cycles, Carnot efficiency, exergy.
Heat transfer: fundamentals, conduction, convection, heat exchangers, introduction to radiation.

Fluid Dynamics: hydrostatics, conservation of mass, linear momentum equation, Bernoulli equation, pipe flow.

Power plant engineering: Ideal and real Rankine cycles, gas turbine power cycle.

Bioenergy: Bioenergy in the world, biomass combustion, challenges in the biomass use, bioenergy in EU, future use of biomass.

Additional information

EN: The course is aimed for students who want to independently brush up their basic knowledge of subjects needed in Master';s studies.

Study materials

EN: Course materials in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	2 cr
Course Completion		2 cr
Method 2	Recurrence 1: 1. period-Summer	2 cr
Course Completion		2 cr

BH61A0000 Fundamentals of Energy Economics

BH61A0000 Energiatalouden johdantokurssi

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Energy Technology 100%
Responsible persons	Minna Loikkanen, Administrative person Tapio Ranta, Responsible teacher Raghu KC, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: Upon completion of the course the student will be able to: 1. apply alternative investment calculation methods in energy investments, 2. calculate the energy contents of fuels in different energy units, 3. describe the fundamentals of energy production methods and the applicable fuel options, 4. describe the grounds for the fuel price determination, and 5. identify the grounds for the security of energy supply.

Content

EN: Finnish energy economics. Principles of investment calculation methods. Main energy units and heat value of fuels. Energy chain of fuels. Principles and efficiencies of energy production methods. Fuel prices and the effect of emission trading. Maintenance and delivery reliability.

Additional information

EN: The implementation in Finnish is lectured in Lappeenranta and it is meant for all the other students but B.Sc. DD.
The implementation in English is lectured in Lahti and is meant for the students of the B.Sc. DD programmes taught in English only.
The course is related to UN's Sustainable Development Goals (SDG): affortable and clean energy, decent work and economic growth, industry, innovation and infrastucture, sustainable cities and communities, climate action

Study materials

EN: The learning material is based on the latest research and is distributed to students in Moodle.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	2 cr
Course Assessment		2 cr
Course Registration		0 cr
Method 2	Recurrence 1: 2. period	2 cr
Course Assessment		2 cr
Course Registration		0 cr

BH40A0710 Measurements in Energy Technology

BH40A0710 Measurements in Energy Technology

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	2 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Energy Technology 100%
Responsible persons	Minna Loikkanen, Administrative person Pekka Punnonen, Responsible teacher Maria Olkku, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: Upon completion of the course the students will be able to 1. recognize temperature, pressure, mass and volume flow, flow velocity and air humidity measurements devices in related to energy technology processes, 2. performance practical calculation needed in measurements,
and 6. understand basics of uncertainty of measurements.
Completion of the course supports the development of the following generic competences for working life: mathematics and natural sciences, practical application of theories

Content

EN: Examples of measurements in Energy Technology. Physical quantities and units. Least squares method (LSM). Temperature and pressure measurements. Flow and velocity measurements. Shaft power measurement and air humidity measurements. Flow visualization. Introduction to uncertainty of measurements.

Additional information

EN: ***
The course is related to UN's Sustainable Development Goals (SDG):

7 affordable and clean energy, 9 industry, innovation and infrastructure.

Study materials

EN: Venkateshan S.P. (2022). Mechanical Measurements.
Stephanie Bell (1999). A Beginner's Guide To Uncertainity of Measurement. National Physics Laboratory.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	2 cr
Course Completion		2 cr

BH60A7200 Circular.now

BH60A7200 Circular.now

Curriculum period	2025-2026
Validity period	since 1 Aug 2025

Credits	3 cr
Languages	English, Finnish
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Environmental Technology 100%
Responsible persons	Sanni Väisänen, Responsible teacher Annukka Ilves, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: After successfully completing the course, students are able to:
1. explain the targets of circular economy and understand possibilities to implement circular economy in different sectors,
2. understands capability of the selected products, production systems and services to fulfil the requirements of circular economy

Content

EN: Introduction to circular economy: circular economy aspects related to food systems, forest systems, product design, transportation sector and sharing economy.

Additional information

EN: ***The course is related to UN's Sustainable Development Goals (SDG):
7 affortable and clean energy, 9 industry, innovation and infrastructure, 11 sustainable cities and communities, 12 responsible consumption and production, 13 climate action.

NOTE! BH60A7200 Circular.Now and BH60A5401 Introduction to Circular Economy are alternative, both cannot be included in the degree!

Submitted tasks will be evaluated at the end of each period.

Company collaboration: The course utilizes video material recorded in collaboration with companies, showcasing real circular economy solutions across various industries.

Artificial intelligence: all kind of AI tools, including excess use of translation tools, is forbidden and will lead to failing the course.

Study materials

EN: Circular.Now MOOC material in DigiCampus.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	3 cr
Course completion		3 cr
Method 2	Recurrence 1: 1. period-Summer	3 cr
Course completion		3 cr

BH60A6801 Sustainable.now

BH60A6801 Sustainable.now

Curriculum period	2025-2026

Validity period	since 1 Aug 2025
Credits	3-5 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Environmental Technology 100%
Responsible persons	Annukka Ilves, Administrative person Miika Marttila, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN: After successfully completing the course, students:
1) Understand the intersectional, partly contradictory, goals and interdimensionality of the climate challenge and the challenges of sustainable development.

2) Are familiar with the multidisciplinary links between climate change and different goals of sustainable development, and will identify different tools for solving problems.

3) Outline the importance of positivity and solution orientation both through the global responsibility of individuals and through the transformation of existing structures.

Content

EN: Sustainable.now is a basic course for anyone interested in sustainable development and climate change. The principles of sustainable development will be linked to the 1.5 degree climate target.
- Ecological sustainability

- Social sustainability

- Economic sustainability

- Cultural sustainability

The course provides a solid knowledge package on the concept of sustainable development and its ecological, social, economic and cultural dimensions, as well as the connections and tensions between them. The ethical perspective that runs through the course provides a basis for considering sustainable development also as a political and normative concept. The course also emphasizes the importance of agency and the different roles of the individual. Students will be given the opportunity to look at the sustainability of their own lifestyle in terms of individual choices, but on the other hand, sustainability and climate challenges will also be presented as a structural and systemic problem.

Additional information

EN: The course is a part of Climate University – a multidisciplinary digital learning platform in sustainability challenges. The flexible study paths to the working life is a collaboration project of eleven Finnish universities.
The student can choose either 3 or 5 credits option upon the need.

The course is related to UN's Sustainable Development Goals (SDG):

1 no poverty

2 zero hunger

3 good health and well-being

4 quality education

5 gender equality

6 clean water and sanitation

7 affortable and clean energy

8 decent work and economic growth

9 industry, innovation and infrastucture

10 recuded inequalities

11 sustainable cities and communities

12 responsible consumption and production

13 climate action

14 life below water

15 life and land

16 peace, justice and strong institutions

17 partnership for the goals

Study materials

EN: Material and Literature specified in MOODLE course overview.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period, 4. period	6 cr
Course Completion in English		3 cr
Course completion in Finnish		3 cr
Method 2	Recurrence 1: 2. period, 4. period	10 cr
Course completion in English		5 cr
Course completion in Finnish		5 cr
Method 3	Recurrence 1: 2. period, 4. period	3 cr
Course Completion in English		3 cr
Method 4	Recurrence 1: 2. period, 4. period	5 cr
Course completion in English		5 cr
Method 5	Recurrence 1: 2. period, 4. period	5 cr
Course completion in Finnish		5 cr
Method 6	Recurrence 1: 2. period, 4. period	3 cr
Course completion in Finnish		3 cr
Method 7		3 cr
Course Completion in English		3 cr
Method 8		3 cr
Course completion in Finnish		3 cr
Method 9		5 cr
Course completion in English		5 cr
Method 10		5 cr
Course completion in Finnish		5 cr

LES10A020 Engineering Physics

LES10A020 Engineering Physics

Curriculum period	2025-2026
Validity period	since 1 Aug 2025

Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LUT School of Energy Systems 100%
Responsible persons	Annukka Ilves, Administrative person Minna Loikkanen, Administrative person Mikko Äijälä, Responsible teacher Paula Immonen, Responsible teacher Ayesha Sadiqa, Responsible teacher Cassia Santos Nunes Almeida, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: High school level of Physics and Mathematics

Learning outcomes

EN: After successfully completing the course, students are able to:
1. approach physics problems in a systematic way, connecting physics phenomena to theory, using the SI system and evaluating accuracy.

2. solve simple qualitative and quantitative physics problems related to course contents.

3. communicate and collaborate with peers, verbalise physics knowledge in English, use educational technologies, and develop confidence as a university student.

Content

EN:
1. Electricity and magnetism: electrostatics, direct-current circuits, basics of magnetism, electromagnetic induction
2. Thermal physics: thermodynamic systems and quantities, thermal expansion and heat transfer, phase changes and ideal gas law, laws of thermodynamics, heat engines.
3. Oscillations and waves: periodic and circular motion, harmonic oscillation, harmonic waves, mechanical and electromagnetic waves.

Additional information

EN: The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 5 gender equality, 8 decent work and economic growth, 9 industry, innovation and infrastructure, 10 reduced inequalities, and 17 partnership for the goals.

Study materials

EN: Course textbooks (online), lecture notes, videos, online exercises.

Literature

Urone, P. P., & Hinrichs, R. (2012). College Physics (OpenStax).

Moebs, W., Ling, S. J., & Sanny, J. (2016). University Physics Volume 1. Rice University.

Ling, S. J., Sanny, J., Moebs, W., Friedman, G., Druger, S. D., Kolakowska, A., ... & Wheelock, K. (2016). University Physics Volume 2.

Halliday, D., Resnick, R., & Walker, J. (2013). Fundamentals of physics. John Wiley & Sons.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	3 cr
Course Completion		3 cr

LES10A200 Engineering Mathematics I

LES10A200 Engineering Mathematics I

Abbreviation: EMI

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LUT School of Energy Systems 100%
Responsible persons	Barkat Bhayo, Responsible teacher Annukka Ilves, Administrative person Minna Loikkanen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Basic knowledge of fundamental mathematics

Equivalences to other studies

LES10A010 Engineering Mathematics 1

Learning outcomes

EN: After completing this course, students will learn calculations and the utilization of formulas and identities to simplify mathematical expressions and solve equations. Moreover, they will grasp the concepts of limits and derivatives, enabling them to evaluate questions related to these topics by applying the rules of limits and derivatives, and understanding their applications in engineering problems. Additionally, students will acquire the ability to evaluate various types of integrals and measure the area and volume of geometrically shaped bodies, and applications in Engineering (electrical, energy & environmental, and mechanical). Furthermore, they will develop a basic understanding of modeling and solving initial value problems.

Content

EN: Function theory: definition of difference types of functions, inverse function, composite function, and their inverse, usage of functions in engineering problems
Trigonometric functions: Definitions, identities of trigonometric functions, modelling waves, current waveforms, sinusoidal voltage signals.

Limit: definition of limit, continuity and discontinuity, limit of composite functions.

Differentiation: slope, Newton Quotient, definition of limit, rules of differentiation, Chain rule, higher order derivative, rate of change, monotonicity, maximum and minimum, extrema, application problems in engineering, L'Hôpital's rule.

Integration: definition and rules of integration, initial values problems, change of variables, Riemann sums and definite integral, applications of integration (mean and average of a function, area under the curve, area bounded by region, arc length, volume of solid), techniques of integration.

Additional information

EN: This course replaces LES10A010 Engineering Mathematics 1 together with LES10A210 Engineering Mathematics II.

Moreover, the course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 5 gender equality, 8 decent work and economic growth, 9 industry, innovation and infrastructure, 10 reduced inequalities, and 17 partnership for the goals.

Study materials

EN: Lecture material and other material are given during the course.

Literature

Robert A. Adams: Calculus - A Complete Course (any edition)

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	3 cr
Course Registration		0 cr
Course Assessment		3 cr

LES10A210 Engineering Mathematics II

LES10A210 Engineering Mathematics II

Abbreviation: LES10A210 EMII

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LUT School of Energy Systems 100%
Responsible persons	Barkat Bhayo, Responsible teacher Annukka Ilves, Administrative person Minna Loikkanen, Administrative person Juho Ratava, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: Basic knowledge of fundamental mathematics

Equivalences to other studies

LES10A010 Engineering Mathematics 1

Learning outcomes

EN: After completing this course, students will achieve the knowledge of parametrizing curves and solving related problems. Moreover, they will gain conceptual understanding of matrices and their operations, along with applications. Students will be able to interpret engineering problems using vectors and find solutions by applying vector properties and operations. They will also attain knowledge of complex numbers,

their mappings, and applications of analytic and harmonic functions in engineering (electrical, energy & environmental, and mechanical).

Content

EN: Curves: Curves and their types, parametric equations, length of curve, area of surface of revolution. **Coordinates:** Polar coordinates, cylindrical and spherical coordinates, and their applications

Matrices : Definition and operations on matrices, pixel, applications to transformation, determinant, Cramer's rule, inverse of matrix, solving system of linear equations, Gaussian elimination, eigenvalues, characteristic equation.

Vectors: Definition, dot product, cross product, work, are of parallelogram, volume of parallelepiped, coplanar vectors, vector equation of line, distance from a point to line or plane, applications in engineering.

Complex analysis: Definition, operations of complex numbers, polar form, Euler's formula, complex mappings, functions of complex variables, analytic function, harmonic function, applications in engineering, Möbius transformation, conformal mappings, and their applications in engineering.

Additional information

EN: This course replaces LES10A010 Engineering Mathematics 1 together with LES10A200 Engineering Mathematics I. The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 5 gender equality, 10 reduced inequalities

Study materials

EN: Lecture notes and course material will be provided during the course.
Optionally Robert A. Adams: Calculus - A Complete Course, and/or Erwin Kreyszig: Advanced Engineering Mathematics.

Literature

Robert A. Adams: Calculus - A Complete Course
Erwin Kreyszig: Advanced Engineering Mathematics

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	3 cr
Course Registration		0 cr
Course Assessment		3 cr

LES10A410 Engineering Project Work

LES10A410 Engineering Project Work

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5-10 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LUT School of Energy Systems 100%
Responsible persons	Michael Child, Responsible teacher Alex Rosu, Responsible teacher Annukka Ilves, Administrative person
Study level	Basic studies

Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Compulsory prerequisites

BK10A6101 Technical Documentation and 3D Modeling

BK10A6300 Engineering Design

Learning outcomes

EN: After successfully completing the mandatory part of the course , students are able to:

- apply knowledge gained from earlier course work to practice
- improving time management, critical thinking and problem-solving skills
- collaborate effectively and systematically in a multicultural environment
- develop creative ideas and solutions to real-world problems
- planning and implementing a product development project as part of development team based on a written project plan.
- design and implement a product or service
- incorporate end-user or customer needs into product/service design
- give and receive feedback on the effectiveness of project activities
- making a connection between innovation, design, and production with the sustainable development goals (SDGs)

Additionally, depending on amount of optional credits:

- use tools and other resources to develop a prototype
- testing a prototype to come up with further development suggestions and to optimize the design of final product
- presenting a built prototype to a real audience of peers and invited corporate sponsors during the spring's JHC seminar at Lappeenranta campus or other event
- prepare supplementary plan for further development of the prototype while also reporting the main results related to the prototype development/testing

Content

EN: The course enhances experience in challenge based learning through a learning-by-doing approach. Students will be engaged in solving a specific real-world problem or answering a complex question related to one of the core areas of expertise (Electrical engineering, Energy technology, Mechanical engineering, Environmental Technology etc.). In the end, students will demonstrate new knowledge and skills by developing a useful product or service in cooperation with possible corporate sponsors and presenting it to a real audience.
Students will receive extended instruction on the nature of challenge based learning, and then apply this knowledge to the project work. First steps will involve defining the question, problem or challenge that will serve as the basis of the project work. This will be followed by the design of a prototype product or service (and based on achievable additional credits, the construction phase of the prototype will also be involved). Throughout the project work, students will give, receive and use feedback to further improve their process and prototypes. Possible corporate sponsors may also provide feedback throughout the project. After refinement, the designed product/service and possible prototype will be explained, displayed, and presented to peers and possible corporate sponsors.

Additional information

EN: Blended learning
***

Students can participate in their group's project work on both campuses (Lappeenranta/Lahti)

***

It is possible to achieve a total of 10 credits in the course:

- mandatory 5 ECTS are gained during periods 1-2
- additional/optional 5 ECTS can be gained during periods 3-4

***

The course is related to the UN's Sustainable Development Goals (SDG), depending on the project chosen:

1) no poverty

2) zero hunger

3) good health and well-being

4) quality education

5) gender equality

6) clean water and sanitation

7) affordable and clean energy

8) decent work and economic growth

9) industry, innovation and infrastructure

10) reduced inequalities

11) sustainable cities and communities

12) responsible consumption and production

13) climate action

14) life below water

15) life and land

16) peace, justice and strong institutions

17) partnership for the goals

Study materials

EN:

- Material available in Moodle
- J. Michael Bennett, Project Management For Engineers, World Scientific Publishing Co Pte Ltd, 2014, ISBN 978981322485
- Pahl G. ; Beitz W., 1996. Engineering Design: A Systematic Approach, London, Springer. 543 s.
- Ulrich K.T. ; Eppinger S.D. 2000. Product Design and Development. New York, Irwin McGraw-Hill. 358 s.
- Virkkala V., 1994. Luova ongelmanratkaisu. Helsinki. 292 s.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-4. period	5-10 cr
Course Completion		5-10 cr

BK10A6202 Mechatronics

BK10A6202 Mechatronics

Curriculum period 2025-2026

Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English, Finnish
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Mechanical Engineering 100%
Responsible persons	Annukka Ilves, Administrative person Heikki Handroos, Responsible teacher Ming Li, Contact-info
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Equivalences to other studies

BK60A0200 Mechatronics

Equivalences (free text field)

EN: BK10A6200 Mechatronics 5 ECTS cr

Learning outcomes

EN: After successfully completing the course, students are able to:
· summarize the structures, properties, advantages and drawbacks associated with different mechatronic transmissions.
· select an appropriate control, sensor and data transmission system for various kinds of mechatronic machines
· dimension, compare and select appropriate components for a mechatronic system<
· develop a PLC-based control for a mechatronic machine

Content

EN: Typical designs of mechatronic systems in various industrial machines and processes. Structures, operating principles and selection criteria of mechatronic components. Dimensioning hydraulic, pneumatic and electrical transmissions by using mathematical equations. Selection criteria for sensors and control systems. Accuracy of measurement and sensing systems. Intelligent materials in actuators.

Study materials

EN: Lecture notes in the Moodle

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	5 cr
¤LAB/LUT: Course Assessment		5 cr
¤LAB/LUT: Course Registration		0 cr
Method 2	Recurrence 1: 1. period-2. period	5 cr
¤LAB/LUT: Course Registration		0 cr
¤LAB/LUT: Midterm Exam 1		0 cr
¤LAB/LUT: Midterm Exam 2		5 cr
Method 3	Recurrence 1: 1. period-2. period	5 cr
¤LAB/LUT: Course Assessment		5 cr
¤LAB/LUT: Course Registration		0 cr
Method 4	Recurrence 1: 1. period-2. period	5 cr
¤LAB/LUT: Course Registration		0 cr
¤LAB/LUT: Midterm Exam 1		0 cr

¤LAB/LUT: Midterm Exam 2 5 cr

BK10A7300 Machine Elements and Principles

BK10A7300 Machine Elements and Principles

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Mechanical Engineering 100%
Responsible persons	Annukka Ilves, Administrative person Changyang Li, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Compulsory prerequisites

BK10A6300 Engineering Design

BK80A4000 Engineering Mechanics I

BK80A4010 Engineering Mechanics II

or

BK10A5800 Engineering Mechanics 1

BK80A4010 Engineering Mechanics II

BK10A6300 Engineering Design

or

BK80A4000 Engineering Mechanics I

BK10A6000 Engineering Mechanics 2

BK10A6300 Engineering Design

or

BK10A5800 Engineering Mechanics 1

BK10A6000 Engineering Mechanics 2

BK10A6300 Engineering Design

Equivalences to other studies

BK65A0203 Engineering Design

Learning outcomes

EN: Students who complete the course will demonstrate the following outcomes by project work and written report:
- how to work target-oriented in a machine design team

- how to design or select machine elements for improved performance

In addition, a student understands the basic skills and knowledge required in real-world machine element design. Key learning outcomes are

- Understanding the relations between distance, time, velocity, and acceleration
- Applying vector mechanics to solve kinematic problems
- Creating schematic drawings of real-world mechanisms
- Determining the degrees of freedom (mobility) of a mechanism
- Using graphical and analytic methods to study the motion of planar mechanisms
- Using computer software to study the motion of a mechanism
- Designing cam and gear mechanisms
- Distinguishing the machine elements of machinery
- Understanding the impact of lubrication on machine elements

Content

EN: This course builds upon students' preliminary engineering mechanics and design knowledge. The aim is to help students understand the interactions between machine elements and how they affect the performance of mechanical systems. The course covers advanced concepts of the theory of machines and mechanisms and lubrication. The focus is on practices and procedures that will give students the expertise to apply kinematics analysis in designing mechanisms and understand how to synthesize the linkages in such mechanisms. The lubrication of machine elements is an essential aspect of the course as it governs the performance of mechanical components. The technical considerations primarily relate to the interaction between machine elements. We aim to demonstrate engineering procedures that involve selecting, specifying, designing, and sizing mechanisms to achieve specific motion objectives.

Additional information

EN: This course is related to all UN's Sustainable Development Goals (SDG): 7 and 11.

Study materials

EN: 1. Uicker Jr., John J and Pennock, Gordon R and Shigley, Joseph E, (2017). Theory of Machines and Mechanisms. (5th ed.) Cambridge University Press
2. Schmid, Steven R, Hamrock, Bernard J and Jacobson, Bo O, (2013). Fundamentals of Machine Elements (3rd ed.). CRC Press

Literature

Uicker Jr., John J and Pennock, Gordon R and Shigley, Joseph E, (2017). Theory of Machines and Mechanisms. (5th ed.) Cambridge University Press

Schmid, Steven R, Hamrock, Bernard J and Jacobson, Bo O, (2013). Fundamentals of Machine Elements (3rd ed.). CRC Press

Norton, RL, (2020). Design of Machinery: An Introduction to the Synthesis and Analysis of Mechanisms and Machines. (6th ed.) McGraw-Hill Education,

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	5 cr
Course Completion		5 cr
Method 2	Recurrence 1: 1. period-2. period	5 cr
Course Completion		5 cr

BK10A6400 Basics of FE-Analysis

BK10A6400 Basics of FE-Analysis

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	4 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LES, Mechanical Engineering 100%
Responsible persons	Marko Matikainen, Responsible teacher Annukka Ilves, Administrative person Antti Ahola, Responsible teacher Changyang Li, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Prerequisites

EN: BK10A6000 Engineering Mechanics 2 completed

Equivalences to other studies

BK80A2800 FE-analysis, Elementary Course

Learning outcomes

EN: Upon successful completion of the course, the student will be able to:

- Understand the mathematical and physical foundations of the displacement-based Finite Element (FE) method.
- Analyze statically loaded mechanical structures using both MATLAB and commercial FE analysis software.
- Solve eigenvalue problems of mechanical structures using MATLAB and commercial FE analysis software.
- Utilize Large Language Models (LLMs) and other AI-based tools to develop and code a basic FE solver in MATLAB.
- Assess the robustness, accuracy, and efficiency of FE solutions.

Content

EN: The objective of the lectures is to impart a fundamental understanding of the elemental stiffness matrices for rod, beam, and solid structures, the assembly of the global stiffness matrix, the imposing of boundary conditions and loads, and the solution strategies for both static and linearised dynamic problems analysed using the finite element method. The exercises will introduce FE analysis using commercial FE software.

Additional information

EN: ***
The course is related to UN's Sustainable Development Goals (SDG): 9 Industry, Innovation and Infrastructure, 11 Sustainable Cities and Communities, 12 Responsible consumption and Production, 13 Climate Action, 17 Partnerships for the Goals

Study materials

EN: Lectures notes in the Moodle.

Literature

Cook, Robert D., Finite element modeling for stress analysis
Hughes, Thomas J.R., Finite Element Method: Linear Static And Dynamic Finite Element Analysis
Hakala M.K., Lujuusopin elementtimenetelmä.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	4 cr
¤LAB/LUT: Course Registration		0 cr
¤LAB/LUT: Course Assessment		4 cr
Method 2	Recurrence 1: 1. period-2. period	4 cr
¤LAB/LUT: Course Registration		0 cr
¤LAB/LUT: Course Assessment		4 cr

CT30A3232 Basics of Linux

CT30A3232 Basics of Linux

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Jouni Ikonen, Responsible teacher
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: Basic computer use skills

Learning outcomes

EN: Upon completion of the course the student has the transferable skills for workstation use in later courses in computer science. Students are able log in to a Linux machine using both graphical and text based UI, know the basics of Ubuntu operating system, understand the benefits of command line use in Linux, navigate in the file system and manipulate files and their access rights. Additionally the student will know how to use command line I/O redirection, form searches and regular expressions, create shell scripts and use networking programs.

Content

EN: Installation of a Linux operating system. Virtualisation software. Graphical desktop environments in Linux. Terminal and basic command line use. Command line based text editors, command line programs and program installation. Command line I/O and file system management. Regular expressions, shell scripting, command line network programs and file transfer.

Additional information

EN: Note

Can't be included in the same degree as CT30A3230 Työaseman käytön perusteet.

Exam examination available only in LUT University campuses.

AI applications may be to understand the material, but the answers to the assignments to be submitted must be achieved through independent work.

The course is related to UN's Sustainable Development Goals (SDG): 9 industry, innovation and infrastructure, 10 reduced inequalities, 11 sustainable cities and communities, 12 responsible consumption and production, 17 partnership for the goals

Study materials

EN: Just Enough Linux - Learning about Linux one command at a time / Malcolm Maclean (online)
Linux Fundamentals / Paul Cobbaut (online)

Advanced Bash-Scripting Guide / Mendel Cooper (online)

Getting to know Terminal: Linux and command line management, Lappeenrannan teknillinen yliopisto 2015, Annika Ikonen, Timo Hynninen ja Erno Vanhala

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	3 cr
Course Completion		3 cr
Method 2	Recurrence 1: 1. period-2. period	3 cr
Course Completion		3 cr

CT60A5540 Computer networks and Internet

CT60A5540 Computer networks and Internet

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Jouni Ikonen, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: computer usage skills

Learning outcomes

EN: At the end of the course students will be able to
1. Understands how data transfer is done in internet and knows what kind of components are involved and what are their tasks.

2. Explain why layered network model is needed.

3. Understands how each layer of tcp/ip model works.

Content

EN: In today's connected world everybody should understand in some level how data is transferred in networks and more so in case of people building services used over Internet. Course familiarizes student with knowledge of how Internet works, what kind of components are involved and what kind of protocols are involved. Topics include network topologies, network reference model, Data link layer (multiplexing, Ethernet, WLAN), network layer(switching, internet protocol), transport layer (tcp, udp), application layer (dns, http).

Additional information

EN: You may use AI applications to understand the material, but the answers to the assignments to be submitted must be achieved through independent work.

The course is related to UN's Sustainable Development Goals (SDG): 8 decent work and economic growth, 9 industry, innovation and infrastructure, 10 reduced inequalities, 11 sustainable cities and communities.

Study materials

EN: Computer Networking: A Top-Down Approach, 8th Edn 2022 James F. Kurose and Keith W. Ross

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	3 cr
Course Assessment		3 cr
Course Registration		0 cr
Method 2	Recurrence 1: 1. period	3 cr
Course Assessment		3 cr
Course Registration		0 cr

CT70A9111 Software Development Skills: Front-End

CT70A9111 Software Development Skills: Front-End

Abbreviation: CT00CM00

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	1 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Erno Vanhala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: CT30A2803 User Interfaces and Usability

CT60A0203 Introduction to Programming (or equivalent)

Compulsory prerequisites

CT30A2804 User Interfaces and Usability

CT60A0203 Fundamentals of Programming

Learning outcomes

EN: 1. Develop practical skills for software development
2. Learn the best practices and approaches of software development

3. Develop the skilled expected in industry to work as a software developer.

Content

EN: This course aims give students a chance to create unique projects with a hands-on approach.

The course guides students to find their interest in software engineering skills and to help each student find their desired path in software developing in the future. There are also several other Software Development Skill courses available on different topics.

The goal in this course is to make a responsive webpage using html, CSS and a little JavaScript. These are the basic tools to make today's web-frontend. Students may use Bootstrap or animations in addition. The project focuses only on the layout, styles and the overall structure of the page.

Course is 100% online self-study.

Additional information

EN: ***

The course is related to UN's Sustainable Development Goals (SDG):9 industry, innovation and infrastructure, 10 reduced inequalities

Study materials

EN: Available online (Moodle)

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	1 cr
¤LAB/LUT: Course Completion		1 cr

CT70A9140 Software Development Skills: Full-Stack

CT70A9140 Software Development Skills: Full-Stack

Abbreviation: CT00CM01

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%

Responsible persons	Jonna Naukkarinen, Administrative person Erno Vanhala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: CT30A2803 User Interfaces and Usability
CT60A0203 Introduction to Programming

CT60A2411 Object-Oriented Programming

CT60A4304 Basics of Database Systems
(or equivalent)

Compulsory prerequisites

CT30A2804 User Interfaces and Usability

CT60A0203 Fundamentals of Programming

CT60A2412 Object-Oriented Programming

CT60A4304 Basics of database systems

Learning outcomes

EN: 1. Develop practical skills for software development
2. Learn the best practices and approaches of software development

3. Develop the skilled expected in industry to work as a software developer.

Content

EN: This course aims give students a chance to create unique projects with a hands-on approach.

The course guides students to find their interest in software engineering skills and to help each student find their desired path in software developing in the future. There are also several other Software Development Skill courses available on different topics.

The course gives the student basic understanding of full-stack development. The goal is to create a basic front- and back-end and bundle them together as a complete system.

The focus is to understand the bigger picture and how to bundle different software components together to create a working program. You will learn how to use MEAN-stack as a full stack tool bundle to create an app from scratch.

Course is 100% online self-study.

Additional information

EN: ***

The course is related to UN's Sustainable Development Goals (SDG):9 industry, innovation and infrastructure, 10 reduced inequalities

Study materials

EN: Available online (Moodle)

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	3 cr
¤LAB/LUT: Course Completion		3 cr

CT70A9120 Software Development Skills: Mobile

CT70A9120 Software Development Skills: Mobile

Abbreviation: CT00CM02

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Erno Vanhala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: CT30A2803 User Interfaces and Usability
CT60A0203 Introduction to Programming (or equivalent)

Compulsory prerequisites

CT30A2804 User Interfaces and Usability

CT60A0203 Fundamentals of Programming

Learning outcomes

EN: 1. Develop practical skills for software development
2. Learn the best practices and approaches of software development

3. Develop the skilled expected in industry to work as a software developer.

Content

EN: This course aims give students a chance to create unique projects with a hands-on approach.
The course guides students to find their interest in software engineering skills and to help each student find their desired path in software developing in the future. There are also several other Software Development Skill courses available on different topics.

The goal in this course is to make an Android app with Android Studio. The app should have basic functionality with buttons and views. This course aims to teach the basics of mobile development.

Course is 100% online self-study.

Additional information

EN:
***

The course is related to UN's Sustainable Development Goals (SDG):9 industry, innovation and infrastructure, 10 reduced inequalities

Study materials

EN: Available online (Moodle)

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-Summer	3 cr
¤LAB/LUT: Course Completion		3 cr

CT30A2910 Introduction to Web Programming

CT30A2910 Introduction to Web Programming

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Erno Vanhala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Tweet text

EN: The basic course of web development

Compulsory prerequisites

CT60A0203 Fundamentals of Programming

or

CT60A0250 Fundamentals of Programming for international programs

Recommended prerequisites

CT60A2412 Object-Oriented Programming

CT30A3232 Basics of Linux

Learning outcomes

EN: At the end of the course student is able to: 1) Understand the programming concepts of the web, 2) Knows how to use HTML and CSS to build responsive web pages, 3) Create simple applications with JavaScript to run inside browsers and 4) Familiarize oneself with responsive design and utilization of external APIs

Content

EN: Web standards: HTTP, HTML, CSS and JavaScript. The browser environment with its Document object model (DOM). Building web sites with commonly used tools.

Additional information

EN: ***

The course is related to UN's Sustainable Development Goals (SDG):9 industry, innovation and infrastructure, 10 reduced inequalities

Study materials

EN: Lecture slides and videos.
Other material announced in the lectures.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period	3 cr
¤LUT/LAB: Course Completion		3 cr

CT70A9150 Introduction to DevOps

CT70A9150 Introduction to DevOps

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Software Engineering 100%
Responsible persons	Jonna Naukkarinen, Administrative person Erno Vanhala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Information and Communication Technologies (ICTs)

Prerequisites

EN: Basics of Linux (or equivalent knowledge),CT60A0203 Introduction to Programming

Recommended prerequisites

CT30A3232 Basics of Linux

CT60A0203 Fundamentals of Programming

Learning outcomes

EN: At the end of the course the student will be able to:
1. Design and implement repositories for software engineering projects

2. Understand how the evolution of development practices led to DVCS and DevOps

3. Understand and solve issues related to versioning and deployment

4. Set up continuous deployment pipeline

5. Implement testing and other deployment processes as a part of a DevOps process

Content

EN: Distributed version control systems (DVCS). Modern repository hosting platforms, such as GitHub and GitLab. Repository best practices, management, and administration. Solving repository errors. Continuous deployment processes and executing tests. Basics of container platforms, such as Docker. Deploying basic applications from source control systems.

Additional information

EN: ***
The course is related to UN's Sustainable Development Goals (SDG):9 industry, innovation and infrastructure, 10 reduced inequalities

Study materials

EN: Tutorial videos, online readings, and other material assigned at the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 3. period, 1. period-2. period, 4. period-Summer, Summer	3 cr
Course Completion		3 cr

BJ01A5061 Entrepreneurship and Career Opportunities in Raw Materials Sector

BJ01A5061 Entrepreneurship and Career Opportunities in Raw Materials Sector

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	3 cr
Languages	English
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Chemical Engineering 100%
Responsible persons	Maria Mamelkina, Responsible teacher Armi Rissanen, Administrative person
Study level	Basic studies
Study field	Fields of education (Ministry of Education and Culture), Engineering, manufacturing and construction

Learning outcomes

EN:

- Recognize entrepreneurship and career opportunities in raw material sector.
- Understand the primary sector of the raw materials value chain (geology, mining, mineral processing, metallurgy, and the environment).
- Apply design thinking tools to enhance the creativity and innovation capacity of engineers.
- Develop skills and competences to improve the mindset of entrepreneurship.

Content

EN: Most of industrial sectors are facing a new era that requires companies to transform their operations, create new business models and foster a digital culture. In this context, the industry is facing a changing talent landscape, necessitating of new skillsets in their workforce. Companies need to ensure that their staffs are properly constituted to support this transformation process.

During the course, entrepreneurship skills as well as innovative thinking for engineers will be trained using the examples from raw material sector. Case studies will bring the understanding of skills and competences of the future workforce and current trends of the industrial revolution.

Additional information

EN: This course can be included in elective studies.
The course is related to UN's Sustainable Development Goals (SDG): 4 quality education, 11 sustainable cities and communities, 12 responsible consumption and production.

Study materials

EN: Lecture notes, articles related to the topics.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period	3 cr
Course Completion		3 cr

VT10A1400 Environmental Communication

VT10A1400 Environmental Communication

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Iina Hellsten, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

Learning outcomes

EN: After completing the course, the students:
Can describe the main theoretical strands of environmental communication

Have acquired skills to communicate about environmental issues

Content

EN: The course focuses on the main strands of environmental communication covering environmental risks such as ozone hole depletion, biodiversity loss, and climate change as well as the main measures to counter environmental risks. The course consists of hybrid teaching with recorded lectures, on-campus lectures and online exercises.

Additional information

EN: ***
The course is related to the UN Sustainable Development Goals (SDG): Not relevant

Study materials

EN: Course literature is to be announced in the beginning of the course.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period Recurrence 2: 3. period	5 cr
Course Completion		5 cr

VT10A1500 Political Communication, Social Movements and Activism

VT10A1500 Political Communication, Social Movements and Activism

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English
Grading scale	General scale, 0-5
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LENS, Social Sciences 100%
Responsible persons	Tarja Pettinen, Administrative person Kaisa Pekkala, Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Social sciences

Learning outcomes

EN: After completing the course, the student will:
· Understand the role of political communication, social movements, and activism in society.

·Understand the key concepts and research directions in political communication and social movement research.

·Be able to identify and examine current phenomena in the field

Content

EN: The course focuses on how societal influence is exercised through communication. It examines political communication and its key concepts and theories. Students will also explore social movements and activism as forms of influence. The course will look at current phenomena in political communication and the role of social movements and activism in contemporary society.

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 2. period Recurrence 2: 4. period	5 cr
Course Completion		5 cr

VA10A1500 Introduction to Entrepreneurship

VA10A1500 Johdatus yrittäjyyteen

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English, Finnish
Grading scale	General scale, 0-5

University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	LBS, Business Administration 100%
Responsible persons	Satu Vesin, Responsible teacher Markku Ikävalko, Responsible teacher Suvi Tiainen, Administrative person
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Tweet text

EN: LITO course

Prerequisites

EN: The course includes a compulsory preliminary assignment that has to be completed successfully by a pre-defined date.

Learning outcomes

EN: During the course, the student will learn to understand the significance of an entrepreneurial team, and will form an understanding of entrepreneurship as a creative activity that happens in the form of business.
After completing the course, the student will be able to:
- define business-related principles, possibilities and challenges
- plan business initiating from customer needs, value creation, testing and agility
- interpret business-related substance areas where competence is needed

Content

EN: The decision to become an entrepreneur:
- an introduction to entrepreneurship
Creating viable business ideas:
- creating business opportunities
- preliminary research
- industry analysis
- business plan
From an idea to an entrepreneurial firm:
- building a team
- analysing start-up strengths and weaknesses from the funding perspective
- ethical and legal issues when starting a company
- writing a business plan and constructing a story
- attracting funding
Managing an entrepreneurial firm and creating growth:
- marketing
- Understanding VC (Venture Capital) operation
- IPRs (Intellectual Property Rights)
- The challenges of growth and managing growth
- growth strategies
- operation forms

Additional information

EN: Note
Only for students of technology and social sciences.

Please note that the students of LUT Master's programme in Entrepreneurship can NOT include this course in their Minor nor degree.

The latest information about the course is updated and published on the course platform at www.lito.fi.

1. The course will run from 2 October to 1 December 2025 (Weeks 40–49). There is a pre-assignment in week 38.

Please note that the completion of the course takes place on the DigiCampus learning platform. Login instructions to the platform will be provided to the students who have registered for the course via email.

The LITO courses are organised in co-operation with multiple universities. To enable registering credits when the course is completed, it is necessary to transfer data about the student from their home university to the university that is responsible for organizing the course. The data to be transferred consists of: name, gender, nationality, e-mail address, personal identification number and the home university. Data that is classified as secret is not transferred. Without data transfer it is not possible to have the course credits registered.

Study materials

EN: Barringer, B. ; Ireland. D. (2012). Entrepreneurship: Successfully Launching New Ventures, 4th Edition. Prentice Hall. **Later editions can also be used, but please note that the page numbers for the later versions vary.**

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period	5 cr
Course Completion		5 cr

VA10A1700 Understanding and Managing a Business as a Dynamic Whole - Business Simulation Game

VA10A1700 Liiketoimintaosaamisen kokonaisdynamiikka ja sen ohjaaminen - yrityssimulaatio

Curriculum period	2025-2026
Validity period	since 1 Aug 2025
Credits	5 cr
Languages	English, Finnish
Grading scale	Pass-Fail
University	Lappeenranta-Lahti University of Technology LUT
Responsible organisation	Education other than LUT University 100%
Coordinating organisation	University of Turku 100%
Responsible persons	Suvi Tiainen, Administrative person
	⚠ [information missing], Responsible teacher
Study level	Intermediate studies
Study field	Fields of education (Ministry of Education and Culture), Business, administration and law

Tweet text

EN: LITO course

Prerequisites

EN: The course serves as a capstone, bridging together the other modules in the LITO entity. The course provides an overall picture of business dynamics and explains how the different fields of business studies are related to it. Various tools and services outside the LITO learning platform may be used in the analyses during the course.
It is recommended that before taking this course, the student has taken at least the following LITO courses: ‘Introduction to Accounting and Financial Management’ and ‘Basics of Management and Organisations’. Alternatively, the student must possess sufficient previous knowledge in these fields in order to be able to analyse a business as a whole.

Recommended prerequisites

VA10A1000 Basics of Management and Organisations

VA10A1200 Introduction to Accounting and Financial Management

Learning outcomes

EN: After completing the course, students will be able to:
· describe how different areas in business studies are connected in the entity of enterprise functions and in making a profit

· apply various methods of collaboration in a virtual team and to become aware of the key regularities in the collaborative business environment

· apply different business analysis tools in planning and managing a business and understand the essential role of strategy in the process.

A central part of the course is the optimisation of a business as a whole with respect to both various business functions and goals; students will understand why it is not practical to optimise single functions separately and why the management needs to have a holistic perspective of the company that simultaneously takes into account social, ecological and financial responsibility.

Content

EN: · The foundation for this course is a decentralised and collaborative business simulation exercise in which students work in teams and collaborate with other teams. Besides engaging in real-time decision-making during the simulation days, the students will complete assignments that relate to various business sciences and analyse the actions taken in the simulation outside the simulation days.
· Participation takes place in small virtual groups, the members of which come from different universities.

· The thematic core for the simulation is the entity formed by the different functions of a company and the responsible agency of the company in a network of enterprises. The relevant themes include several areas of cross-company functions (purchasing, project management, distribution and customer relationships) and the reporting related to these topics. The course emphasises the entity of business operations from the perspective of responsible management.

· During the course, students are introduced to the dynamics of business networks where the students' company is part of a network of competitors, suppliers and customers.

· The theoretical material and the exercises distributed on the course are related to the thematic core for the simulation and for other LITO learning themes.

Additional information

EN: The first course period runs from late September to late November 2026 (Weeks 40–47). There is a pre-assignment in Week 40.
The second course period runs from late January to mid March 2026 (Weeks 4–11). There is a pre-assignment in Week 4.

The third course period runs from mid March to mid May 2026 (Weeks 12–19). There is a pre-assignment in Week 12.

Please note that the completion of the course takes place on the DigiCampus learning platform. Login instructions to the platform will be provided via email.

The LITO courses are organised in co-operation with multiple universities. To enable registering credits when the course is completed, it is necessary to transfer data about the student from their home university to the university that is responsible for organizing the course. The data to be transferred consists of: name, gender, nationality, e-mail address, personal identification number and the home university. Data that is classified as secret is not transferred. Without data transfer it is not possible to have the course credits registered.

Study materials

EN: The literature includes: simulation game instructions, a description of the simulation environment, learning videos, a course hand-out and a selection of other articles (to be announced).

Completion method and assessment items	Recurrence	Credits
Method 1	Recurrence 1: 1. period-2. period Recurrence 2: 4. period, 3. period Recurrence 3: 4. period	5 cr
Course Completion		5 cr